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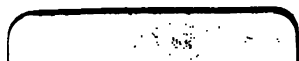
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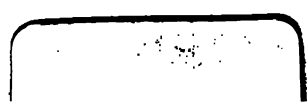






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THE  
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EDITED BY  
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*Et quoniam variant morbi, variabimus artes;  
Mille mali species, mille salutis erunt.*

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# *Sion College*

## THE LONDON Medical and Physical Journal.

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For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long but an invaluable series.—*Rush*.

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### ORIGINAL PAPERS, AND CASES, OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

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#### SCIRRHUS OF THE BREAST.

*Cases of Scirrhus of the Breast.* By HERBERT MAYO, F.R.S.  
Surgeon to the Middlesex Hospital, &c.

THE following cases exemplify different forms of a complaint too frequent not to have been repeatedly witnessed by all the readers of this Journal. They are instances, 1, of simple scirrhus; 2, of scirrhus assuming a fungoid character: under a third head, I have described a tumor which, although probably not malignant, more nearly resembles scirrhus than any other morbid structure.

#### I.

A woman, about forty-five years of age, had been afflicted several months with scirrhus of the mammary glands and of the integuments. The right breast was nearly flat, the nipple retracted; the integument immediately covering the gland, as well as the adjacent integument upon the right side and front of the body, was thickly studded with hard nodules. These nodules were a little elevated; most of them were about a third of an inch in diameter, one or two an inch, one an inch and a half; the largest among them were covered with a crust or thick scab. There were several lymphatic glands in the axilla enlarged and indurated; the right arm was œdematous and greatly swollen.

The œdema was temporarily diminished, as I have seen happen in other similar cases, by the application of a blister to the swollen arm. The patient complained of

darting pains and a sense of burning in the right breast. The left breast was harder than natural, and the surface of the gland felt coarsely granulated: the nipple was not retracted.

Upon the death of this patient, I carefully examined the body, and remarked the following appearances:

The gland of the right breast, when divided, was of a gray colour, and presented a texture like that of an unripe pear, cutting with a characteristic resistance and sound. Tubuli lactiferi were seen upon the surface of the section, both in the gland and nipple, containing a thick white secretion. The right pectoral muscle, to which the breast strongly adhered, had two or three large, firm, white tubercles in its substance.

The structure of the left breast was different from that of the right: the gland was greatly hardened, but had preserved its natural colour; its surface was exceedingly irregular, being raised into innumerable little elevations, and when divided, the section had a corresponding character, and bore some resemblance to the section of an incised pumice. The left breast was readily separable from a thick layer of cellular membrane, which intervened between it and the pectoral muscle: this layer of membrane was studded with numerous small, white, hard, flattened nodules, varying from two to three lines in diameter.

The lymphatic glands that were affected were hard, white, and dense: when they were divided, the appearance of the cut surface was the same.

The smaller nodules upon the skin were hard and firm: they had the colour of the skin, which seemed thickened and hardened, and had become distinctly laminated, to form them. The larger nodules differed from the rest in this, that the cellular membrane beneath them was converted into a like substance, a thin layer of fat partially intervening between it and them. On lifting off the crust from the largest, the surface was found to be soft and vascular, with something of a villous appearance.

The structure which I have described as met with in the gland of the right breast in the preceding case, is the common appearance of scirrhus.

I removed, by the advice of Mr. Cartwright, the breast of a lady, on the 9th of May, in the present year. The lady's age is sixty-eight. The tumor had been forming two years. There had been some doubt about its nature, as it had not been attended with lancinating pains, and as



there was an evident collection of fluid in it immediately to the outside of the nipple. But elsewhere the tumor felt like a scirrhus: it was of the size of an egg. The nipple was flat, but not retracted. The lymphatic glands were not affected.

On examining the tumor after its removal, its substance was exactly what I have described above. The fluid, which had been felt, was contained in a cavity of the scirrhus substance: it amounted to about two ounces, and was partly serous, partly viscid, of a dirty yellow colour.

The lady continues perfectly well at the present time; and her age and the slow growth of the scirrhus being considered, it is probable that the disease will not return.

On the 3d of October, I removed the breast of a lady, whom I attended with Mr. Allan, of Epsom. Her age is forty-three. She is married, and has had twelve children. A year ago, a hard lump formed in the axilla, near the outer margin of the right breast, which was taken out by an operation last February. It is her impression, and very possibly an erroneous one, that at that time the breast itself was affected.

When she placed herself under my care, in September last, the cicatrix of the former operation adhered to a tumor below, which felt like an enlarged lymphatic gland; and the neighbouring corner of the breast had the characteristic induration of scirrhus. Three fourths of the breast seemed healthy; the nipple was not retracted. She suffered lancinating pains in the hardened part. I removed the whole breast, with the cicatrix, and two indurated glands and some thickened membrane.

The indurated portion of the breast had the character described above; the glands and hardened membrane were white and dense.

The following case hardly, perhaps, deserves a place among instances of scirrhus, but its partial resemblance to the preceding leads me to mention it.

Ann Shaw, ætat. twenty-six, unmarried, was admitted into the Middlesex Hospital, July 29th, 1828, with a small hard tumor, immediately below and to the outside of the right breast. The tumor, which was then of the size of the last joint of a finger, had been first observed four months before: it was then smaller, and had gradually enlarged to its present size. It was in some degree tender on pressure, and was attended with shooting pains. Leeches and fomentations, and an alterative course of medicine, were

used during three or four weeks, without advantage. I therefore thought it prudent to remove the little tumor, which I did a few days after the patient came into the hospital. The tumor appeared to consist of an enlarged and hard lymphatic gland. The wound healed readily. Some shooting occurred in the cicatrix a few weeks afterwards, but it went away upon the application of leeches and warm fomentations; and I have every reason to believe this patient has continued, and continues quite well up to the present time.

Mary Dale, ætat. fifty-eight, came from the neighbourhood of Dorking, to be admitted into the Middlesex hospital, on the 19th of March, 1828, with a hard tumor of the left breast, of the size of a moderately large walnut. The tumor had been first observed two years and a half before her admission. During the last four months, it had been the seat of pricking, shooting, and lancinating pains. During the last month, sensations of a similar description had been felt in the left axilla, where, upon examination, two glands were found enlarged to the size of a hazelnut, not very hard, but extremely tender on pressure, which the breast was not.

Under a strong impression that the breast was affected with scirrhus, and that the glands felt in the axilla were merely enlarged from inflammatory irritation, I amputated the former, and left the latter; the removal of which would have rendered the operation considerably more severe.

I should not, however, in similar circumstances, again leave enlarged glands near a scirrhus; which the tumor in the breast in this instance was supposed, and proved to be. Nevertheless, I have not learnt that, in the case of Mary Dale, this practice has been unsuccessful. The suspected glands, indeed, swelled considerably within a short time after the operation, during the healing of the wound; but, on the repeated application of leeches and poultices, they subsided, and before she left the hospital, where she remained several months, they were scarcely larger, or more distinctly to be felt, and were not of a harder substance, than the glands of the opposite axilla. It is now nearly a year since I have seen or heard of this patient.

## II.

A lady, ætat. sixty-six, was attended by Mr. North for a small tumor in the inner and upper part of the left breast.

She had been aware of its existence about seven months. It was slightly tender when pressed upon; it was not hard, but felt like common inflammatory thickening of a lobe of the breast. In July last, Sir Astley Cooper saw this patient with Mr. North: he entertained the same view of it which Mr. North had taken, and prescribed a mercurial alterative at night, with a bitter and aperient draught in the morning; the part to be bathed with a spirit lotion. This plan was pursued for a few weeks, during which the complaint continued stationary.

In August I saw this patient with Mr. North: the part had become somewhat painful; it had slightly increased in size, and there was fulness of the glands of the axilla; but the character of the tumor had not altered. We agreed that leeches should be occasionally applied, and the mercurial alterative used again. The symptoms yielded to this treatment; the breast ceased to be painful.

The lady now left town: on her return, the beginning of October, the symptoms had greatly changed for the worse. The tumor of the breast, although not much larger than before, had now all the character of scirrhus; at the same time, subcutaneous tumors had begun to form in different parts of the body. Her breathing became affected; she was unable to lie down in bed. She then sunk rapidly, and died on the 1st of November.

The body was examined by Mr. North and myself, with Mr. Arnott. The lump upon the inner edge of the left breast was prominent, so as to raise the integuments: it had to the touch the consistence of a scirrhus. Two other parts of the breast felt indurated, but not in the same degree. On making a section of the gland, the lump at the inner edge presented the following appearance: it was nearly spherical; its substance was particularly hard and dense, slightly elastic, and mottled grey and white, the white predominating; the margin was here and there of a softer texture, and, for the depth of a third of an inch, highly vascular, or bloodshot. The morbid structure ended abruptly.

The other two indurated parts had a different character: the induration began insensibly, so that it was difficult to determine exactly where the natural structure of the breast ended. The central part of each was dense, slightly elastic, of a dull white colour; and, in one of the indurations alone, the white was partially mottled with grey. In the condensed substance at one part, and at another in the soft and natural substance of the breast, there was a body,

of the size of a pea, that was internally soft and bloodshot, and resembled, in some degree, the margin of the lump first described.

The right breast had partaken of the same affection: it was indurated in two places, so that, deducting from the preceding description of the left breast the account of the more advanced and maturer tumor, the rest will stand as a sufficiently exact account of the state of the right.

The tumors in the subcutaneous cellular membrane were about as large as middle-sized peas: there were from twenty to thirty dispersed about the abdomen, immediately below the integuments, to which they did not adhere; a considerable group was situated below the right breast, and there were a few, individually of larger size, about each clavicle; and at least a dozen upon the back, between the shoulders. Almost all these tubercles had one character: when entire, they felt firm and tense; when cut through, a quantity of fluid escaped, in some serous, in others thicker and whitish. The parenchyma of the tumors was a soft, grey, spongy flesh, highly vascular or bloodshot, and exactly resembling the pealike tumors in the substance of the breast. Two or three only of the little tumors about the right breast, when cut through, were of that dense white substance, which is the commonest state of the glands about a scirrhus breast.

It appeared to Mr. Arnott, Mr. North, and myself, that all the little subcutaneous tumors were diseased lymphatic glands.\*

In the substance of each lung, and in the liver, there were several tubercles, of dense, white, elastic substance.

A poor woman, thirty-eight years of age, who had borne a family, was admitted into the Middlesex hospital in March last, with disease of the left breast. Six months before, she had observed a hard lump in the gland, the whole of which, at the time of her admission, was affected, and had the characteristic induration of scirrhus; the nipple was retracted. Two or three glands in the axilla were enlarged, but they appeared quite within reach.

\* I need not remark that minute subcutaneous lymphatic glands are extremely numerous upon the trunk, head, and neck, although they seldom form a business in disease. I recollect some years ago being sent for, to see a young gentleman, of a nervous diathesis, who had been exposed to cold and damp, and had a violent attack of fever, with a sudden growth of twenty to thirty little rounded and exquisitely tender nodules, as big as peas, about the back of the head and neck, which almost prevented him laying his head on his pillow. I treated the complaint as a severe cold, and in two or three days the swelled glands were much less painful, and had begun to subside.

The breast, together with the glands, was removed on the 6th of March. The breast had the true character of scirrhus, except at the outer and lower part, where the surface of the diseased structure was softer, very vascular, with a cavity containing a dark red serum.

Five glands were removed. One, a flattened sphere an inch in diameter, was filled with a firm, whitish, caseous substance, which admitted of being squeezed out in coarse granules. The smaller of the diseased glands had each a large nucleus of the same substance.

On the fourth day some fever supervened; the parts became swollen and painful. One or two strips of adhesive plaster were reapplied on changing the dressings, with a poultice over the whole. The skin was not red, but looked, with the membrane below, thick and swollen.

In two or three days a profuse discharge came from the interior of the wound: it was sanious, with a large quantity of oil floating in it. The wound now went on favorably, and healed. But, in six weeks from the operation, the parts about the cicatrix began to thicken, and enlarged rapidly into an immense mass of fungus, which occupied the whole of the left side of the chest and axilla, and part of the right side. This broke, and sloughed rapidly, being attended with great pain; and the poor patient sank, and died within five months after the operation.

She found some alleviation of her suffering in the application of folds of linen, steeped in an aqueous solution of opium, to the open and sloughing surface.

In October 1827, I removed the right breast of a lady, ætat. fifty-seven, whom I attended with Mr. Cartwright. She was of a full habit, and the breast was large, from the quantity of adipose substance. The whole gland was uniformly scirrhus. The disease had been forming several months. No lymphatic gland was enlarged; but the cellular membrane was observed to be generally, though very slightly, indurated. Little hard points were felt on pressing portions of the adipose substance that had been removed in the operation.

The wound healed favorably; but in five months the parts round the cicatrix began to enlarge, and in the course of a short time the whole axilla and right side were occupied by a large, rounded, and lobulated mass, of the consistence of firm dough. This lady survived the operation a year and a half. The fungous tumor broke, and began to slough, a short time only before her death.

The fungoid growth, which often supervenes in scirrhus of the breast, commonly resembles in texture the firmer part of a fungus hæmatodes. Occasionally it partially retains something of that fibro-cartilaginous texture which belongs to scirrhus.

Pure fungus hæmatodes is comparatively an infrequent disease of the breast. I witnessed the following case of that complaint, when house surgeon to the Middlesex hospital.

A young unmarried woman, ætat. nineteen, was admitted into the hospital, under the care of Mr. Cartwright, in March 1819. Six years before, a tumor, unattended with pain, formed under the right breast: the whole of the breast gradually became involved in the disease. In the course of another year the left breast became affected. At the time of her admission both breasts were considerably enlarged; the right, however, was a third larger than the left. The colour of the left was natural; that of the right dark, inclining to the colour of old mahogany. Both breasts were to the touch firm, with a consistence like dough. The surface between the breasts was hard and prominent; the skin thickened and nodular. At this part there were two ulcerated holes, an inch in diameter: the surface of the ulcers was dark. This patient had not experienced much pain: that which she had felt had been rather smarting than pain, and had been confined to the right breast and to the ulcerated part. She died soon after her admission.

The left breast (the smaller) was of a hard, white, firm, and fibrous, but doughy substance; here and there a calcareous concretion was found in it; in parts the texture was softer, more like the substance of brain, and slightly blood-shot in parts.

The right breast was generally softer, and great part of it consisted of brainlike substance, here and there streaked with blood.

The substance between the breasts, and the lymphatic glands, were white and firm; the white, doughy substance admitted of being squeezed out in a caseous or pulpy consistence.

The right pectoral muscle was pale and wasted. The interstices between the fasciculi were studded with numerous small tubercles, which, when squeezed, yielded a white pulpy substance. This white, doughy, or pulpy formation was found both in the pleura costalis and the pleura pulmonalis, on the right side. There was a large quantity of water in the cavity of the right pleura.

## III.

A lady, fifty-eight years of age, married, but never having borne children, observed for the first time about six years ago, a hardness at one part of the right breast. About two years after this, she had a fever, during which the tumor disappeared. In 1827 the tumor returned, but no remedies were made use of till March 1828, when she placed herself under my care. Mr. Brodie saw her at that time, in consultation with me.

The right breast was enlarged, and formed a flat oval cake, five inches in length, four in breadth, and about two in thickness. To the touch, the tumor was firm, and slightly elastic, its surface even, or very slightly lobulated. It was easily moveable upon the pectoral muscle. The nipple was slightly retracted. The skin over the tumor was not tense; the subcutaneous veins were enlarged. At times shooting pains were felt in the breast, and there were two points at which the tumor was tender on pressure: one internal to the nipple, the other at the upper and outer part. This lady is of a pale complexion and relaxed habit, liable to occasional partial attacks of erysipelas upon the face, and continually requiring small doses of aperient medicine to move the bowels.

R. A drachm of *Liquor Potassæ* to be taken three times a day in table-beer. A drachm of the ointment of hydriodate of potass to be applied to the tumor night and morning.

The adoption of this plan was of temporary service. At the expiration of two months, the general health had greatly improved; the bowels no longer needed medicine; the shooting pains in the breast had entirely gone away. The tumor had not enlarged, and had become less tender on pressure.

The lady now went into the country, with directions to continue taking the *Liquor Potassæ*, in a dose increased to a drachm and a half three times a day.

Towards the winter this lady returned to London, having steadily pursued the plan laid down, in all but the constant use of the ointment, which at one time irritated the skin. About the middle of December 1828, the changes that had taken place were the following: The breast had enlarged considerably; the shooting pains had recurred; and there was some tenderness in the axilla, but no enlarged gland could be felt there. I directed the application of leeches to the axilla, with hot fomentation afterwards, and the tenderness in the axilla went away.



It appeared to me that no time was to be lost in removing the tumor. Sir Astley Cooper, who saw this case in consultation with me, concurred in this opinion. I amputated the breast early in January last.

Upon examining the part after its removal, the disease, it appeared, had not involved the whole breast, part of which lay compressed and condensed to the right of the tumor, towards the axilla. The nipple adhered partly to the unchanged breast, partly to the tumor, but was readily and cleanly separable from the adjoining parts. The tumor was about three inches in thickness, five in length, four in breadth. It was weighty, and tense and distended. On cutting it through, the texture generally had a crispness like unripe fruit: the surface of the section was of a light gray colour, glistening, and semitransparent; the interior texture succulent, in the softest parts tearing, when a little force was used, into gelatinous strings; at the circumference, the texture became more dense, and approached more nearly, in colour and consistence, the character of true scirrhus. There was no cavity in any part of the tumor.

On the fourth day after the operation, the patient complained of pain at the lower and inner angle of the wound. The wound was dressed: adhesion seemed to have taken place along the greater part, and there was no inflammatory tumefaction, or unusual tenderness, where the uneasiness was felt; yet, when she drew in her breath, there was some pain at this point, which caught her, and suddenly checked the inspiration. This symptom had come on during the preceding night. The pulse was ninety; the skin something heated, but rather moist than otherwise; the tongue neither furred nor dry. I thought it right, under these circumstances, to take away some blood: when she had lost fourteen ounces she became faint, and said that the pain had nearly left her. The blood showed that it would have a size. In less than an hour the pain recurred more severely than before. She was again bled to sixteen ounces, when she became faint again, and the pain was scarcely felt. She then fell into a dose, and, on awaking, declared herself entirely relieved from the pain and oppression of breathing.

Every thing now went on favorably, and the wound had healed in a fortnight after the operation. The lady is now in perfect health.

I am induced to add some illustrations of open cancer of the breast, or of scirrhus which has gone into ulceration.

With this view I select two cases at present under my care in the Middlesex hospital; the first an instance of simple cancer, the second of fungoid cancer.

Esther Christie, ætat. sixty-five, (Whitbread's ward;) a widow, has borne children. Four years ago a tumor formed in her right breast, which, in a year, began to ulcerate. She has now been two years in the hospital, under my care. When she was admitted, there was an extensive ulcer upon the right side of the chest. The character of this ulcer has not materially changed during the last two years; but, in point of size, it is a fourth larger than at the time of her admission: its area is rather more than sixteen square inches. The surface of the ulcer is tolerably even; it is covered with large, firm, red granulations; towards the middle there is a strip of surface which is imperfectly cicatrised. The edges of the ulcer are elevated; they are but little discoloured, and of the true hardness and touch of scirrhus. This hardness extends to a very small distance from the edge of the ulcer. The edge of the ulcer is very irregular, here inverted, there everted, as it has happened that the ulcer had eaten away in different parts more or less of the scirrhus substance round it. It is exceedingly remarkable that there is not the most trifling glandular enlargement in the axilla or about the clavicle of this patient: she cannot, however, raise her right arm to any height. The pectoral muscle in the axilla feels hard and rigid; there is pain down the outside of the arm, from the shoulder to the elbow.

At times this patient suffers violently with acute and darting pain; at other times she suffers little. During an exacerbation of pain, one or other edge of the ulcer, which for the time is the seat of pain, is tumid, and the adjacent ulcerated surface itself of a bright and angry red. On these occasions the application of eight or ten leeches, at a little distance from the edge of the ulcer, has generally proved beneficial.

She has tried every variety of local application: that which she commonly uses is simple ointment; that which has given her, when suffering, the most marked relief, is a mixture of the *Liquor Plumbi dilutus* with an aqueous solution of opium, or else the aqueous solution of opium alone, applied either as a lotion or as the liquid part of a poultice. A lotion consisting of a drachm of the prussic acid of Scheele to a pint of distilled water, appeared to her to irritate the ulcer; the same reduced to half its strength was nugatory in its effects.

In several cases of cancer of the uterus, I have found a solution of a drachm of prussic acid in a pint of distilled water extremely beneficial, as an injection, in soothing pain. When the pain is extremely severe in such a case, I have known the abstraction of blood by cupping upon the sacrum, or, in a patient debilitated by profuse hemorrhage, the temporary application of cupping glasses without scarifying, produce immediate relief.

In connexion with the case of Esther Christie, I may mention that of a patient who died three months since in the hospital, where she had been an inmate nearly as many years. Five years ago, her right breast had been removed by Mr. White. Two years after, the disease returned in the cicatrix. It was singularly slow in its progress. The cicatrix lay a narrow hollow between the edges of the skin, which were thickened, hard, and irregular; the pectoral muscle was indurated towards the axilla, and two or three small, hard glands adhered to its axillary surface. This patient could not raise her arm to any distance from the side: the arm was not swollen, but she experienced pain about the insertion of the deltoid, and the elbow-joint was always in some degree contracted: it was frequently fixed at a semiflexion, with the tendon of the biceps as rigid as a cord. At such a time, the attempt to extend the elbow, or even rudely touching the arm, gave great pain. Nothing relieved this symptom so much as the application of large, hot linseed poultices around the elbow-joint.

The cicatrix had scarcely begun to ulcerate, when this patient died, exhausted by long suffering.

Elizabeth Benson, ætat. sixty, was admitted into the Cancer ward within this month. Her right breast, which is alone affected, presents a well-marked instance of fungoid cancer. The disease began two years ago, as a small tumor of the lower part of the breast; for six months it gave no pain: it broke into an open ulcer about twelve months ago.

In her the ulcer appears deep, from the height of the surrounding fungoid growth, much of which has formed since the disease became an open cancer; the surface of the ulcer is covered with granulations. From one part a portion of the tumor has recently separated by sloughing. The part of the tumor which remains is tender upon pressure; its colour a deep red, mottled with circular patches about the size of a sixpence, which are prominent and white, from the fungous growth which is here pushing up the integument; its texture feels hard and firm.

This patient finds some relief from the application of a bread poultice, with a tablespoonful of the weak prussic-acid lotion stirred into it. The same quantity of the stronger lotion increased the smarting pain which she suffers in the breast.

In descriptions of scirrhus and cancer of the breast, the details terminate either with the performance of a painful operation, or in the history of protracted suffering from the ravages of disease. If the part which has been attacked cannot be removed by an operation, the care of the surgeon is limited to sooth and to lessen the severity of continually increasing bodily pain.

It is evident that the first point to be aimed at in the study of such a disease, is to learn to determine what are the cases in which the affected parts may be removed, with a fair probability of eradicating the complaint.

From the little experience which I have had, I am inclined to suppose that, where the disease is confined to the breast, where the tumor is small and has been slow in its growth, there is reason to expect that the operation will prove entirely successful. I believe, likewise, that the chance of success is greater early and late in life, than at the middle period of life.

Where the tumor is large, where it has grown rapidly, where the whole of the parts engaged cannot be removed, where the skin is diseased over the indurated breast, there the operation for scirrhus is unavailing, and only tends to produce a more rapid and painful form of disease than that which it temporarily removes.

19, George street, Hanover square;  
December 13th, 1829.

#### FUNCTIONAL DISORDERS OF THE SPINAL CORD.

*Observations on Functional Disorders of the Spinal Cord, and their Connexion with Hysteric, Nervous, and other Diseases; illustrated by Cases, selected chiefly from the Reports of the Pallas-Kenry and Currah Dispensaries.*  
By WM. GRIFFIN, M.D. and D. GRIFFIN, M.R.C.S.  
Limerick.

(Continued from the preceding vol. page 489.)

II. THE case of Mrs. H., aged forty-five years, which occurred about the same time, was equally strange and interesting. She was seized with acute pain and great tenderness in the direction of the ascending branch of the colon, with costiveness, thirst, heat of skin, hard, quick pulse, and the most incessant vomiting. In a few hours

In several cases, the patient could scarcely bear the solution of stomach so extreme, fluid was instantly re- water vomited, and the evacua- tives, and eventual pain was instantly re- lieved; but the sickness of I have seen, or no intermission; saline sac- remedies, failed to allay it. the- taken place in the other symp- ty- three days; at the termination

r. their original violence, but the evacuation of the transverse arch of such general fever, with flushing and relief was again obtained by bleeding, purging, and blistering. The occurred a third time in the sigmoid bleeding, &c. was once more resorted to.

On accession of this complaint exhibited symptoms of acute inflammation, it did not, either to resolve or to run its course to a fatal resemblance to it. The same symptoms occurred again, under a variety of treatment, but in succession new portions of the alimen- at intervals of three or four days. The distress- continued throughout.

Several weeks had elapsed, without any material amendment, except that there was less general fever, and less of pulse, and more of debility and emaciation, a consultation was held. There was found, on examination, apparent hardness of liver, and it was thought slight segment, and, as the evacuations had always been bilious, and of a dark colour, intermixed sometimes with green watery bile, the symptoms were supposed to depend on a diseased state of that organ. A mercurial course was, in consequence, agreed on: copious ptyalism was induced, and was followed by a slow but progressive amendment. The vomiting abated; the frequent pain gradually wore away, and, though the lady remained for a long time in an emaciated condition, and was for months subject to slight returns of the complaint, she eventually attained a tolerably good state of health.

The resemblance which the first of these singular cases bore to some of Dr. Monteith's, quoted in Dr. Abercrombie's work, must at once occur to the reader. It forms an exact counterpart in many of the symptoms, the hiccough, palpitations, cataleptic fits, violent spasmodic affection of the abdomen, incessant vomiting, and in the

impairment of vision. As it will be hereafter shown that spinal tenderness almost invariably exists at the very commencement of these attacks, it seems inexplicable that no such symptom should have existed in Dr. Monteith's cases. He states that no disease could be discovered on examination, or by pressure, though in some pain was increased by motion or attempting the sitting posture. It may possibly be, that the examination was not made with sufficient minuteness, as cases occur occasionally in which the tenderness is not at first apparent, and yet, on detecting it, it is found to be very acute. Though no examination was made in the early stage of the first complaint, of which the above history is given, and none at any period of the second, there is not the slightest doubt, from inferences fairly deduced in subsequent inquiries, that in both it might have been detected on the first day of attack, and the true nature of the disease at once ascertained.

The case of the younger lady was highly remarkable in its perfect imitation of almost every possible form of organic visceral disease, in the wonderful endurance of the system under such a continuance of deep and excruciating suffering, and in the apparent existing possibility of recovery after long years, during which every function of the constitution had been successively interrupted or disturbed, and every hour had been the harbinger of some new pain. Whether, in a case so intense, if treatment had been earlier directed to the spine, the disease would have been simplified and rendered more tractable, is questionable; but it, at all events, furnishes ample proof of the fruitlessness of all modes of cure merely directed to symptoms.

The case of Mrs. H., though equally striking, in its perfect semblance of inflammatory affections of different parts of the alimentary canal, was more limited in its sphere of diseased action, and less diversified in the nature of the attacks, only because fewer points of the spinal chain were implicated. Any one conversant in those complaints would infer that there existed acute tenderness of the upper cervical and upper lumbar, and perhaps of the two or three lower dorsal vertebræ.\*

It is an extremely fortunate circumstance, although one

\* Since the above was written this lady was again visited, in consequence of a violent spasmodic pain of the stomach, with which she was seized, followed by sickness, retching, and violent pain of back. She was relieved by hot fomentations to the spine, and aperients. She describes herself as subject to these spasmodic attacks ever since her long illness, that they always attack the stomach or abdomen first, and then, as she expresses it, "fly to the back," and fix there with increased violence. As there was now an opportunity of

little anticipated, that the most minute portion of the medullary substance always does, induce this correlated symptom. Indeed, it is a symptom so constantly associated to so acute a degree, that it seems almost to have been so long unobserved or un-recognized as to appear to have completely escaped even so eminent a symptomatologist as Dr. Marshall Hall. The public owe much to Mr. Abernethy and Mr. Hall for having directed attention to some of those diseases of the bones. Such are the cases of hysteria in the spine, or hysterical tenderness, which a gentleman is said to make mention of in his lectures, and those extraordinary nervous affections pointed to in his excellent work on Diseases of the Joints, as bearing a resemblance to ulceration of the cartilages. Mr. Abernethy, in his essay on the Constitutional Origin of Nervous Diseases, has given several cases, which, it will be known, were evidently those of simple irritation of the spine, but although, with his usual discrimination, he has distinguished them from the more formidable disease of the vertebrae, he seems not to have attached sufficient importance to the tenderness on pressure. He appears to have regarded it rather as one of the many anomalous symptoms connected with nervous irritation, and dependent on disorder of the digestive organs, than as the immediate source of the most distressing and greater number of them.

This symptom is, in fact, usually altogether overlooked in general practice. The patient unfortunately seldom complains of the back, and most frequently does not know that it is in the slightest degree affected. Hence, when the complaints are such as do not very obviously lead to an examination of the spine, the cough, pain of chest, oppression, palpitations, the intense headaches, the spasmodic or apparently inflammatory affections of the abdomen, which fill the sufferer with such apprehension, present also the most obvious objects of treatment to the physician. It should never be forgotten that all affections at the sources of nervous power, or origins of nerves, are indicated by pain or disturbed action at the minute and distant extremities; and that this must hold true with respect to the brain

ascertaining the truth of former conjectures, it was not neglected. There was extreme tenderness of all the lumbar vertebrae, and a slight degree at the seventh dorsal: she feels the pain in this last situation acutely when under the influence of the attack.



and spine, as well as with any of the great nervous trunks in which the phenomenon is more frequently observed. The following case of general irritation of the spine will serve to show how singularly true they sometimes are in the corresponding pains.

III. Bridget Leary, ætatis twenty-two, complains of constant distressing headaches, with oppression and shrill piping noise in breathing, pains in all her joints, pain at the pit of the stomach, in the sides, round the hips, in the limbs and feet. All these pains are increased by motion or exertion of any kind, and relieved by the recumbent position. She is weak, and troubled with palpitations; there is some feverishness, with whiteness of tongue, but the skin is cool; complains of continued sense of burning in the epigastrium, increased much by stooping or straightening herself, by over-bending or extending the spine; says "she often thinks her stomach will light;" feels as if her arm would break when she lifts it, she is seized with such pain there and in the axilla. The oppression is worse at night than in the day time.

On examining the spine, the whole column was found acutely tender; pressure at the first or second vertebra occasioned pain, which shot forward from the occiput to the brow; a little lower, pain was excited at the larynx; on pressing one of the lower cervical, it occurred at the point where the trachea dips behind the sternum; on pressing the upper dorsal, at the middle of the sternum; from the third or fourth dorsal to the eighth or ninth, it was excited at the ensiform cartilage; yet lower, at the sides, and in the lumbar vertebræ, pain was excited in the iliac and pubic regions. Pressure behind the trochanter produced pain at the crista of the ilium, at the inside of the thigh, and also in the sides, or in the opposite hip. On the thigh or knee, it excited pain in the shins and toes. The pain was more acute on pressing the first or second cervical, and seventh or eighth dorsal, than any others; which accounts for the headach and pain of stomach having been the most constant and distressing of all the symptoms.

This is by no means either one of the most uncommon or worst forms of spinal irritation. It may be of use, perhaps, to compare it with a case of chronic disease from injury, in which the analogy seems sufficiently strong to assist or influence our views of its nature.

IV. William Collins, a tall, spare man, aged fifty, about two years since, while working in a mill, had his coat seized, and was caught up by the wheel. The machinery

... a sufficient time to prevent his being ground  
 ... his shoulders, back, and neck, were much  
 ... and injured. He was long ill, and had but an  
 ... recovery, remaining affected with paralysis of  
 ... extremities, contraction of the fingers and de-  
 ... of the lower limbs; he also suffered from pain and  
 ... of the muscles of the neck, pains in all the  
 ... and joints, with crackling noise on motion, as in  
 ... rheumatism, and pains frequently in the head,  
 ... or abdomen. He has not latterly complained of the  
 back.

The examination of the spine, which was universally  
 tender, gave the following results:

Pressure on the first or second cervical vertebra occasioned  
 pain over the brow; on the second or third, above and about  
 the larynx; on the lower cervical, the lower part of the tra-  
 chea as it enters the chest, and also at the top of the shoulder  
 and in front of the chest. Pressure on the upper dorsal  
 occasioned it at the superior part of the thorax; on the  
 seventh or eighth, at the ensiform cartilage; on the tenth  
 or twelfth, at the umbilicus. On the upper lumbar, at the  
 sides and pubic region; on the lower lumbar and sacrum, at  
 the groins, hips, and thighs. Behind the trochanter, at the  
 knee and ankle.

When but one point of the cord is affected, the symptoms  
 are proportionally simple: they are more apt to deceive  
 the practitioner, from their resemblance to those chronic  
 local diseases in which the constitution is little disturbed,  
 and because, as has been already mentioned, the patient  
 scarcely ever complains of the back. The following, in  
 which pain of stomach, or at the ensiform cartilage, was the  
 chief ailment, are among the very commonest of these  
 cases.

V. Nelly Neville, ætatis twenty-two, complains of pain  
 at the pit of the stomach, which commenced about two  
 months since, and has continued without intermission. She  
 has slight cough, with general languor and weakness; says  
 she is much tormented with headach, and latterly with pain  
 and stiffness at the back of the neck, which are sometimes  
 relieved by tossing or throwing back the head. Her appe-  
 tite is bad; tongue whitish; eyes slightly yellow. Cannot  
 lift a can or basket, without bringing on or increasing the  
 pain. There is tenderness at the seventh dorsal vertebra  
 pressure on which excites the pain at the stomach; no ten-  
 derness of the cervical. The catamenia are regular, but  
 deficient.

This young woman was perfectly cured in a few days by a few purgatives, blistering over the affected part of the spine, and tonic bitters with acids.

VI. J. Enright, ætatis forty, complains of pain at the lower end of the sternum, with soreness of the part, and slight cough: has been ill with it now for two months; tongue whitish, bowels natural; general health tolerably good. There is extreme tenderness about the seventh or eighth dorsal vertebra, pressure on which occasions a darting pain from thence to the sternum, as if he was pierced by a sword.

Cured by purgatives, though more slowly than the foregoing patient. He was a labourer, and unwilling to blister, as it would oblige him to give up his work.

A case, similar in symptoms, though (if we may judge by its termination) widely differing in its nature, occurs in our notebook about the same period. Organic disease acts in the first instance very much like that strictly called functional, simply by pain, or by disturbance or interruption of function. This case, therefore, while it illustrates what Dr. Abercrombie has so strongly inculcated, the dangerous nature of affections of the spine originating in injury, points out the symptoms which must necessarily result from disturbed function of that particular part, and is tolerable evidence of their dependence on it in those lighter and less dangerous complaints.

VII. A middle-aged man, descending from a wall, fell backwards, and came against a rough stone, which occasioned a bruise about the seventh dorsal vertebra. He thought very little of the accident for some days, although there was slight pain and soreness, but then became affected with constant pain at the pit of the stomach; for relief of which he applied at the dispensary. Pressure on the tender vertebræ produced an instant pain at the pit of the stomach. Purgatives and fomentations to the spine were ordered, and he was desired to come on the next day of attendance, when, if not better, he was to be bled and blistered. Nothing, however, was heard of him for three weeks, when a report came that he had died suddenly. On inquiry, it was found he was so much relieved by the medicines that he did not think it necessary to attend: he, nevertheless, had an unaccountable languor and incapability of exertion about him, and occasionally kept his bed. On the last morning of his life, he said he felt pretty well, and would get up and go to work; but, while dressing with this intention, suddenly fell back and expired.

It is not meant, of course, to assume that spinal tenderness is never a mere symptomatic affection: we shall have frequent occasion to speak of cases which were evidently produced by, and dependent on, intestinal, dental, or other irritations. Mr. Abernethy cites some, which, with every appearance of reason, he attributes to disease of the digestive organs; but, even in many complaints of this kind, especially when existing for any length of time, the spinal affection becomes a serious and absolute disease, reacting on and increasing the disorder which gave it existence, or producing a new train of symptoms proper to itself.

In our early inquiries it was so frequently met with, especially in females, that we found it necessary to make a general examination of the patients attending the dispensary, to ascertain in how far it was to be regarded as an independent affection. The result showed that it was very seldom wanting where those nervous symptoms supposed to indicate disorder of the spinal cord were present, and where there was no local disease to which it could be attributed; while, in almost every instance in which acute or chronic local disease was found to exist, no such tenderness could be detected. Those few cases of local disease in which it was observed, were chiefly acute affections of the liver, or inflammatory complaints resulting from injury; and the former of these were, it is probable, rather an effect than a cause: at least, it is, in any other view, extremely difficult to account for its absence in some intense inflammations which are met with.

The minute attention to the spine which these examinations induced, led to much more interesting inferences than could have been at all anticipated. The great tenderness of the cervical vertebræ, in some cases of sudden fits of insensibility, suggested its existence in epilepsy,\* in some forms of which it was found invariably present; a fact very well agreeing with M. Esquirol's dissections in this disease, which so frequently displayed morbid changes in the cord or its membranes. The connexion observable between tenderness at the same part and headach, soreness and pain of stomach, in cases of spinal irritation, occasioned the discovery of its existence in continued fever, in all cases where there was much disturbance of the stomach and head, and induced a suspicion that it was equally the source of Dr. Clutterbuck's cerebral inflammation and M. Broussais'

\* When speaking of the diseases induced by irritation of the cervical portion of the cord, we shall give some most extraordinary cases of cure of this dreadful malady.

gastro-enterite. The occasional occurrence of shivering fits in spinal cases pointed out some analogy between them and intermittents, and, as was conjectured, most acute tenderness of the whole spine was ascertained to exist in the very few of these complaints which fell within our observation during the last month. It was also detected in numerous cases of neuralgia, in many of paralysis, and in all that class of complaints called *mimosa* which came under our notice. In short, we were finally driven to the conclusion that the greater number of these disorders either wholly depend on some affection of the spinal column, or are strangely and importantly connected with it. It must, of course, be obvious that, in cases usually terminating favorably after a longer or shorter period, morbid anatomy can afford no satisfactory evidence in support of such an opinion. It can admit of little more than hypothetical or analogical proof; but if it be acknowledged that the symptoms of these complaints are such as, from the functions of the spinal cord and nerves, we know any derangement of them may occasion; if it be shown that mechanical injuries of its individual portions occasion symptoms which correspond with those induced by irritation of the same portions; that injuries producing a more general affection induce the precise symptoms which we attribute to general spinal irritation; and, above all, that those affections supposed to depend on this irritation are often readily cured by its removal, after having resisted every other plan of treatment; we shall have attained a degree of probability quite as great as we are accustomed to depend on, or give our assent to, in the more established points of medical reasoning.

It is, after all, satisfactory to reflect that, if more extensive experience should seem to declare the foregoing inferences untenable, the facts must nevertheless hold their ground, and furnish useful matter to the symptomatologist. We have already said enough to show that one of the most important desiderata in diagnosis, is that which would enable us to distinguish between the diseases of irritation and inflammation, between those of function and of structure, between those attacking the sources of nervous influence, yet developing themselves only in distant tissues or organs, and the simpler affections of those organs dependent upon local causes. If any new illustration of this were wanting, we have it in the late Croonian lecture by Dr. Hawkins on affections of the brain, in which he cites many instances where, from the ambiguity of the symptoms,

the disease was supposed to depend on nervous sympathy, and, from the consequent remissness of treatment, terminated in fatal apoplexy. If our views be correct, spinal tenderness would have been discovered in those cases attributed to nervous sympathy, but would have been absent in the inflammatory and organic. This assertion must be received at present as a general one, and with some qualification, especially in affections of the base of the brain immediately adjoining the medulla oblongata.

As, in the present state of our knowledge, strict distinctions, founded on the supposed nature of various spinal affections, must be liable to much error, it seems proper to offer such only as the symptoms would obviously indicate, without assuming that they are in all instances founded on any specific difference in the nature of the complaint. The following may be said to include all which have fallen within our experience.

1st. Cases of irritation of the spinal cord, with tenderness at one or more points of the spine.

2d. Cases with symptoms resembling the foregoing, but unattended by spinal tenderness.

3d. Cases of obscure spinal disease, in which there is extreme pain on twisting or bending the spine, or on lifting weights, but no tenderness on pressure.

4th. Cases of acute spinal inflammation, attended by pains of a rheumatic character, and by many of the symptoms of general irritation of the cord; but chiefly marked by high fever, excruciating pain, and tenderness in some part of the back, occurring in paroxysms on the slightest motion, and often occasioning or ending in paralysis.

5th. Cases of chronic spinal inflammation, attended by pains resembling those of chronic rheumatism, with many of the symptoms of general irritation of the spine, and the usual tenderness on pressure.

6th. Cases of caries of the vertebral bones and distortion, which have been so ably treated of by many eminent writers, it is merely necessary to name, as much rarer diseases than any of the foregoing, but having very many symptoms in common with them, and affording frequent grounds for apprehension and error, when the diagnosis is not attentively studied.

7th. The same may be said of those organic diseases of the spinal cord whose pathology Dr. Abercrombie has taken such pains to illustrate. We have met with very few of them in the course of our practice, and those were such as offered little new or interesting on the subject.

*1. Of Irritation of the Spinal Cord.*

Before entering more particularly into this subject, it may be necessary to make some observations on the use of the word irritation, which has already been of such frequent occurrence. It is, perhaps, one of those phrases very difficult of definition, which, in an obscure science, we are rather constrained than pleased to use, in speaking of the causes of phenomena beyond our explanation. We mean simply to express by it any stimulus acting on the whole or parts of the system, through the sensorium, without primary vascular excitement; and it would appear very probable, even in those diseases apparently originating in vascular excitement, as in inflammations, that the increased action of the vessels is not the first step in the process, but that a certain action or impression, as in the diseases of simple irritation, previously takes place in the sensorium. It does not seem easy to imagine that the actions of any vital part can take place independently of the centre and source of all vital phenomena, any more than sensation or motion could; and it might be a question, if the communication by ganglionic nerves to an injured part could be cut off as perfectly as by the spinal, whether local inflammation could take place at all?

Whatever the nature of nervous irritation may be, we believe its existence is unavoidably admitted by the profession,\* and, though so little comprehensible, a knowledge of its character and action is of vast practical importance in medicine, forming the great distinctive marks between the most opposite classes of diseases. We can observe all its possible effects, though we cannot detect the mode, and note the anomalous discrepancy by which to distinguish its symptoms from signs of diseased structure, when we cannot offer any diagnostic of which we could give the rationale. "Ought it not to be a question," inquires Mr. C. Bell,

\* Mr. John Bell's opinion, that all nervous disorders depend on the circulation of blood in the brain, was founded on the idea that, as the brain was insensible, there could be no such thing as nervous irritation. But he was not then aware that impressions might be received, and distinct actions or sympathies excited, through the medium, not of the brain, but of distinct portions of the spinal cord, now the acknowledged source of all sensation and all motion; and that in this way the functions of the brain, as well as of every other organ in the body, might be either interrupted or rendered more energetic, without its being the seat or medium of the irritation. The fact stated by Desmoulins and Magendie, in their late work on the Vertebrata, that feeling and thought are not only distinct and independent faculties, but are distant from one another in their seats, seems likely to lead to some very interesting speculations on this subject.



“what nervous affections are consequent on trivial irritation?” Perhaps, there is not another connected with medical science, of such real importance, that has been so much the subject of loose and doubtful opinion. Facts, familiar to every one, go far to show what we hope subsequent cases may more fully establish, that there is no manner in which the functions of the senses, sensation, motion, circulation, secretion, may be excited, diminished, or extinguished by organic disease, that they may not also, even more suddenly, by nervous irritation. The heat of the sun on the bare head, the abstraction of blood, the motion of a worm in the stomach, will excite convulsions as effectively as inflammation or altered structure of the brain or spine. The sight of a disgusting insect induces vomiting as certainly as carcinoma of the stomach; the lancing of a whitlow, syncope, as truly as ossification of the coronary arteries of the heart. There is, in short, no affection of sense or motion so painful or paralyzing, that mere irritation may not occasion; and it becomes a doubt only how trivial a degree may produce the worst of these effects, or whether the morbid action bears any regular proportion to the intensity of irritation.

Though the relations of many parts of the system are still so mysterious, and the sympathies so complicate and extraordinary, as to defy all explanation by nervous communication, much may in this way be understood, especially of the spinal cord and its connexions. Its physiology has been so very much elucidated by late experiments, that a little consideration would suggest to us the complaints likely to be produced by affections of any individual portion of it. From its continuity with the brain (that part to which intellectual actions have been assigned), and their known reciprocal sympathies, we should expect its diseases would excite many symptomatic disorders of that organ, as pain, vertigo, delirium, &c., which we shall find not uncommon. As the origin of all sensation and motion, we might anticipate simply painful, or spasmodic, or paralytic affections in any part of the body, or that general loss of feeling and motion in which we sometimes see persons lie, inanimate and powerless; the body still, the eyes fixed, the functions of respiration carried on imperceptibly, yet fully sensible of all that is going on around them. As it includes the origin of the fifth pair, which is found to be essentially necessary to every organ of sense, except sight, in the exercise of its functions, and even to sight to be accessory, irritation or disease near the trunks of that nerve should

induce disturbance of the functions of the senses, or temporary paralysis of all or any of them, or painful affections of the extremities of these nerves themselves, as in the orbital, or facial, or alveolar branches. As the seat of the respiratory functions, we should be inclined to attribute to its disorder many complaints of the respiratory system. Near to the origin of the fifth are the roots of the respiratory nerves, the glosso-pharyngeal, the eighth pair, the spinal accessory, the phrenic; derangement or irritation of which should occasion affections of the throat, respiratory muscles, lungs, diaphragm, and stomach, loss or change of voice, hoarseness; crowing, croupy, or wheezing respiration; barking cough, globus hystericus, spasms of the chest or stomach, difficult deglutition, hiccough, weeping, crying, laughing, &c. Irritation at the root of the cervical nerves might induce, by communication, any of the foregoing symptoms, or occasion pain, stiffness, rigidity, or spasm of the muscles of the neck or arm, or numbness or paralysis. To irritation at the origin of the dorsal nerves we might attribute oppression, palpitation, pain in the anterior of the chest or stomach, or sides; and, at the origin of the lumbar nerves, abdominal tenderness, colic, constipation, pains in the loins, hips, extremities, with injury or paralysis of the bladder, or of the lower limbs.

Lastly, the whole of the medulla spinalis, including the origin of the eighth pair, goes to form the ganglionic system of nerves. These supply all the muscles of involuntary motion, and all the viscera; and we have reason to suppose are mainly concerned in the secreting processes, among which Dr. Wilson Philip places the disengagement of caloric. They are distributed in networks round the arteries, perhaps solely supplying them with nervous power, and rendering them like the heart, though independent of, yet liable to be influenced by, any considerable portion of the brain or spinal marrow. In irritations of the whole or a great portion of it, therefore, we should anticipate irregular action of the heart, evinced in palpitations or in approaches to a suspension of all action, and syncope; interruption of the secretions, evinced in the oppressed breathing, failure of appetite, and flushings or burning heats, or universal shiverings, or coldness of the extremities or of particular members; and irregularities of the circulation, evinced in local, and often violent, determinations, or in loss of tone and vascular debility. How accurately these conjectures are borne out by subsequent cases, the reader will have an opportunity of considering.

[To be continued.]

## PAROTID FISTULA.

*Case of Parotid Fistula, cured by the Concentrated Sulphuric Acid.* By JOHN HIGGINBOTTOM, M.R.C.S.L.

MISS BROOKS, aged seventeen years, received, by instruments used at the time of her birth, a severe injury on the right side of the head and face. Several abscesses formed, which were opened, and some exfoliation took place above the angle of the lower maxilla. Two of the openings made with the lancet never healed, but terminated in salivary fistula; one being situated in the cavity between the mastoid process of the temporal bone, and the condyloid process of the jaw; and the other a little anteriorly to the ear, immediately below the zygoma. The saliva flowed so freely from the openings near the mastoid process, that the patient's neck was constantly in a state of excoriation, and it was necessary to wear napkins constantly upon the breast. Sometimes the orifices would close alternately, but, when that was the case, there was a double discharge from the open one. There was, of course, an increased discharge during mastication.

I first wished to try the most simple means, and attempted to form an adherent eschar by the nitrate of silver over each orifice. This plan succeeded in healing that orifice which was situated anteriorly to the ear, on the first application, but it failed in the other: the eschar remained adherent only for a few days, when it was thrown off, and an increased flow of saliva followed.

When this plan had failed, I used the nitrate of silver, and afterwards as firm pressure as the situation would admit, applied by means of orange peas, plates of lead, and adhesive plaster.

This plan having been continued for a long time without any advantage, I had at last recourse to filling the little cavity with the concentrated sulphuric acid, by means of a feather, every fifth day. I soon found that there was no discharge between the times of applying the acid; but, on delaying its application for a few days, the discharge returned. I therefore continued to apply the acid every fifth day, for eight or ten times. At length, on discontinuing it, I found there was no return of the flow of saliva.

This fistula has now been perfectly cured for nearly three years.

*A Reply to some Remarks contained in a Critical Analysis of Mr. CHARLES BELL's Paper on the Nerves of the Face.*

[WE publish the following letter, because, from the quarter whence we received it, and the time employed in its composition, we suppose it to be as good an answer as can be made to the critical review of the modern discoveries on the Nerves, contained in our last Number. We expected, from the confident tone in which the writer pledged himself to us to give a complete refutation of our statements, that we should have been led, from the new light that would break in upon us, to make a manly and candid admission that our criticism was unfair and erroneous; that we had censured Mr. Bell unjustly, and attributed undeserved credit to M. Magendie and Mr. Mayo. Although we were conscious of having diligently striven to master the question, and to arbitrate fairly upon the points in dispute, some important evidence, we concluded, must have escaped our notice. We looked for nothing less than a strong, and clear, and decisive demonstration of our mistakes, and of the justness of those pretensions which we had considered unfounded. Something interested in a subject to which we had devoted many hours of patient attention, we were not incurious to have the means of thoroughly sifting it afforded us by the advocate of views opposed to our own, and we looked forward almost with anxiety to their production. Truth, we knew, is simple and clear, and easily intelligible; and, as *we* had given a definite shape and purport to *our* allegations, we anticipated from our correspondent a perspicuous, well-arranged, and decisive reply. We have been disappointed. Yet the letter, which follows, may possibly appear more satisfactory to others than to ourselves. We will not, by any further prefatory remarks, interfere to diminish the impression which its first perusal may make. Considering, however, that all our readers may not have studied this question as diligently as ourselves, we *subjoin* a few observations upon passages in the letter, which satisfied *us* of its real value, and induced us not to undertake any fuller analysis of it.—EDITOR.]

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*To the Editor of the London Medical and Physical Journal.*

SIR: I am desirous of addressing some remarks to you on a review which has appeared in your last Journal, entitled "A Critical Analysis of Mr. Charles Bell's Paper on the Nerves of the Face." The influence which you possess, by

conducting a Journal so extensively circulated, must make you anxious to exercise it with impartiality. I have to present views that vary essentially from those contained in the Critical Analysis alluded to, yet I hope you will insert them in the succeeding Number, that your readers may have a fair opportunity of judging of the real state of the question.

The writer has dwelt very briefly upon the paper which was the object of his analysis, but has devoted most of his attention to presenting a history of the discoveries which have been made in the nervous system, professing to explain not merely *what* has been done, but to *whom* the credit of each discovery is attributable. I find it an invidious task to follow him in this review, yet it is my duty to show the misconceptions which he has fallen into. He has placed before us, in a conspicuous light, a fact which demands particular attention: it is this, that, in the course of Mr. Bell's writings, he does not mention Mr. Herbert Mayo's name. The reviewer has attributed to Mr. Mayo what appear to be very important corrections of Mr. Bell's views; and he expresses his regret, also, that Mr. Bell altered his opinions to correspond with those corrections, without acknowledging to whom he was indebted.

I must remark, on entering upon this subject, that if, while showing that there was no just reason for Mr. Bell making any acknowledgment, I am constrained to refer to things which are unpleasant, the blame ought not to rest upon me. I myself am sorry that the writer of the review has revived this subject. There are reasons for believing that Mr. Mayo himself did not wish to continue the discussion.\*

Let me now attend to what is assumed on the part of Mr. Mayo. He claims the merit of having repeated Mr. Bell's experiments, and shown the true nature of the 5th pair and of the portio dura. If there be any other things, these at least are the most important, and to them I beg to call the reader's attention.

It is of the first importance to attend to the manner in which Mr. Bell's opinions are represented. Let me examine, then, what is said of the 5th nerve. In Mr. Mayo's book (the *Outlines of Physiology*, p. 263,) it is said, "The branches of the latter nerve (the 5th) which emerge from the *frontal*, *infra-orbital*, and *mental foramina*, to supply the muscles and integuments of the face, Mr. Bell supposed

\* See the letters in the *Medical Gazette*, in July 1828, and June 1829.

to be nerves *both* of *sensation* and *voluntary* motion." The reviewer, following Mr. Mayo, gives this account: "The muscles of the face, that is to say, the *nasal*, *labial*, and *palpebral* muscles, receive nerves from two sources, viz. the 5th cerebral nerve and the 7th. Now, of the two sets of nerves distributed to the muscles of the face, one, namely the 5th, had been long observed to resemble, in its mode of origin, the spinal nerves. It was probable, therefore, that the 5th serves in the face the same purpose as the spinal nerves in other parts. But the spinal nerves in other parts minister equally to sensation and motion: hence it followed that the *facial* branches of the 5th are probably nerves of sense and voluntary motion jointly." (P. 527.)

I can only say, in regard to these two quotations, that they do not represent Mr. Bell's opinions of the 5th; they are not given in his words; they are opposed to his words; they are inconsistent with his experiments on this nerve; they are inconsistent with his classification: however nearly they may be supposed to approach to his real views, they contain an error which is of paramount importance, as will be seen hereafter. *Mr. Bell never supposed that the influence of the 5th pair, as a muscular nerve, extended to any other parts than to those engaged in mastication.* To this I must beg particular attention, because, on every occasion when Mr. Mayo's pretensions have been placed before the public, this true representation of Mr. Bell's opinion of the 5th pair, as a muscular nerve, has not been given, but the other account has been substituted. Mr. Bell applies to the 5th, in the most distinct way, the name of "the nerve of sensation and mastication;" and he is particular in limiting its functions as a motor nerve to the jaws and lips. It will be seen hereafter, indeed, that the circumstance of its being confined solely to these parts is the principal argument for the arrangement of the nerves into the "symmetrical" and "irregular" nerves.

I will now make extracts from Mr. Bell's first paper delivered to the Royal Society. But I must first mention that there is an inaccuracy in it, which has been explained in the last paper. Mr. Bell was of opinion that the lips had a power of motion in combination with the actions of chewing, and he was led to attribute this to the influence of the infra-orbital branch of the 5th. It has been shown that the infra-orbital is solely a nerve of sensation, and that this combination of the lips and cheeks with the motion of the jaws depends on another nerve, the labio-buccinalis. This, as it will be seen, makes no difference in the proofs

which I have to bring, that it was *those parts of the face only which are engaged in mastication that were supposed to receive any muscular power from the 5th nerve.*

While giving a short comparative view of the 5th, in introduction to the account of his system, Mr. Bell says, "From the nerve that comes off from the anterior ganglion of the leech, and which supplies the mouth, we may trace up through the gradations of animals a nerve of *taste and manducation*, until we arrive at the complete distribution of the 5th, or trigeminus, in man." (P. 14.) "We have seen that when the 5th nerve, the *nerve of mastication and sensation*, was cut in an ass, the animal could no longer gather his food. In the individual whose face was paralysed on one side (by disease of the portio dura), during the excited state of the respiratory organs, there could be observed no debility or paralysis in the same muscles *when he took a morsel in his mouth, and began to chew.*" But the most remarkable and convincing evidence of his considering the *facial* branches to be compound only as regards the lips, is to be found in the account which he gives of his experiments on the infra-orbital nerve. This nerve, it is well known, is distributed profusely to the muscles which operate on the cartilages of the nose, and to those which move the lips. It is expressly stated that, when the nerve was divided, "*no change took place in the motion of the nostril; the cartilages continued to expand regularly in time with the other parts which combine in the act of respiration, but the side of the lip was observed to hang low, and it was dragged to the other side.*" By this exception, made, it must be observed, under a wrong notion of this branch being a compound nerve, we have the best evidence of the limited function which he supposed the 5th nerve possessed. But what does he say of the frontal branch, which it is asserted was supposed by Mr. Bell to be a nerve of voluntary motion and sensation. This is a nerve far removed from the parts engaged in chewing. Accordingly, we find that Mr. Bell has been at the pains to prove that it has no power of influencing the muscles. "I divided the branch of the 5th pair which goes to the forehead, in a man, at his urgent request, on account of the tic douloureux: there followed no paralysis of the muscles of the eyebrow; but in an individual where an ulcer and abscess, seated anterior to the tube of the ear, affected the superior branch of the respiratory nerve, the eyebrow fell low, and did not follow the other when the features were animated by discourse or emotion." (P. 23.) Mr. Mayo has said that he corrected Mr. Bell for

saying that this branch of the 5th was a nerve of voluntary motion and sensation, yet he has never related any experiment to prove whether that opinion was correct or not! The only reference which he ever makes to this nerve is in giving a quotation of the above sentence in the "Commentaries," to which he refers us, (see No. i. p. 118.) This, among other things, proves that his present opinions of Mr. Bell's paper are inconsistent with what he entertained at that time.

Let us next take the portio dura, to examine whether Mr. Mayo has correctly represented the opinions which Mr. Bell entertained of it.

It is not to be wondered at, that, having been mistaken with regard to the facial branches of the 5th, he should fail to represent what were Mr. Bell's true opinions of the other nerve that goes to the same parts, viz. the portio dura. However well the functions which he attributes to this nerve chime in or correspond with those which he gives of the 5th, the account is quite erroneous. Mr. Mayo says (at p. 263, *Outlines of Physiology*;) "Mr. Bell thought that he had obtained by this experiment a proof that the portio dura controls the *instinctive actions*, but not the *voluntary actions of the muscles of the face*." Again, at p. 333, "In other words, according to Mr. Bell, the 7th is the *nerve of instinctive motion* to the face, and the 5th of voluntary motion and sensation." The reviewer, also, following Mr. Mayo, has these words: "Mr. Bell concluded that the portio dura of the 7th (the superadded or respiratory nerve of the face, as he termed it,) was placed for the purpose of transmitting the *instinctive impulse* to muscles already supplied with sentient and voluntary nerves from other sources, namely, from the *facial branches* of the 5th." (P. 527.)

Your readers must already have seen, even from those experiments which have been alluded to, that it was *impossible* Mr. Bell could hold the opinion which is attributed to him. How often has it been repeated, when these same statements were made before, that Mr. Bell never once used the word "instinctive" in any of his writings upon the nerves: it must surely, then, be inconsistent with his opinions; it is a word thrust upon him by Mr. Mayo. The writer of the review, believing that the word instinctive is a fit word, contends against Mr. Bell in this manner: "The whole frame is susceptible, although in a lesser degree, of instinctive excitation, as well as the countenance and throat: the *muscles of the jaws*, especially, which have



almost as much to do in instinctive action as the muscles of the face, have no superadded nerve given to them." I allow this. The chicken, newly hatched, can pick the corn by instinct, just as it can stand or run. It is most probable that this very consideration, that there was no distinction to be drawn, by the application of the principle of instinct, between the muscles of mastication and those of the face, prevented Mr. Bell using the word instinct. For we may learn that it was, in fact, by contrasting these muscles of the jaws with those of the face, that he was led to call the portio dura the *respiratory* nerve of the face.

The account which has been given of this nerve, as it stands opposed to Mr. Bell's words, is contrary both to the experiments which he relates and to the instances which he gives in illustration of the functions of this nerve. When the infra-orbital branch of the 5th was divided, in an experiment upon an ass, we have seen that he pointedly stated that "no change took place in the motions of the nostril." When the frontal branch of the 5th was divided, there followed no paralysis of the muscles of the eyebrow. These parts must, therefore, depend exclusively for the motion which they possess upon the portio dura, the remaining nerve. Accordingly, it is said, in another place, when "the portio dura was divided on one side of the head, the motion of the nostril of the same side instantly ceased." Again, when the branches of the portio dura going to the forehead were destroyed by disease, "the eyebrow fell low, and did not follow the other when the features were animated by discourse or emotion." This nerve (the portio dura) Mr. Bell concluded to be the only nerve of motion to all the parts of the face, except those which are engaged in mastication. It was in regard to the lips alone that there was any exception made. How, then, could it be said that it was the nerve of instinct only?

But it is further alleged, that he considered the portio dura to be an *involuntary* nerve; that it controlled "those movements of the features which are usually called instinctive, as opposed to such as are premeditated." Mr. Bell has not characterised this nerve either as a voluntary or involuntary nerve. Whatever the word instinctive, applied to this nerve, may be thought to indicate, the word "*respiratory*," which Mr. Bell has used, has, according to his explanation, no reference to these questions. From the examples which are given, it is obvious that he knew, at the beginning, that its functions were not either altogether voluntary or involuntary; that it partook of the two pro-

perties: and this opinion he holds still, however others may conceive they have improved our knowledge by saying it is exclusively voluntary. Although the function of breathing generally is carried on without the superintendence of our volition, yet it is necessarily placed in some degree, for the purposes of speech especially, under our control. The examples which Mr. Bell has given of apoplexy and of sleep prove that this nerve, the portio dura, influences the muscles independently of volition; and the other examples, such as those of *speaking, whistling, singing, &c.*, sufficiently prove it can bring the muscles under the direct control of the will.

I repeat, that the experiments which Mr. Bell made on the 5th pair, those on the portio dura itself, and the observations and remarks connected with them, are all broadly opposed to the view which has been represented as his opinion. It must appear inexplicable, since it is the correction of errors only which has been the cause of the continuance of this contest about the facial branches of the 5th and the portio dura, why Mr. Mayo never mentions Mr. Bell's opinions in his own words; why he does not allow at once that Mr. Bell called the 5th nerve "the nerve of mastication and sensation." The reviewer states what he conceives were the notions entertained by Mr. Bell, but he also avoids using Mr. Bell's words. This is a carelessness in conducting a review of these discoveries which ought surely to be condemned; for behold what it has led to. It has led Mr. Mayo to suppose that it was he himself who first suggested what is the true nature of this nerve. He claims to have discovered that this is the nerve of motion to the muscles of the jaws and the nerve of sensation.\*

The same series of misconceptions, and the same negligence of ascertaining the true opinions of Mr. Bell, have made Mr. Mayo believe that he has destroyed the whole system proposed by that gentleman.† The reviewer says, "And these conclusions of Mr. Mayo's, Mr. Bell has subsequently published as his own, having, as it appears to us, substantially abandoned his theory of the respiratory nerves, and adopted a truer view, without (we regret to say) acknowledging to whom he is indebted for the correction." All that I need remark is, that Mr. Bell has not departed from the opinions which he has expressed in the first or introductory paper, presented in 1821 to the Royal Society.

\* See No. ii. *Anat. and Phys. Commentaries, and Outlines*, p. 336.

† See *Outlines*, p. 333.

And it may be already seen that Mr. Mayo has not effected what he says, *because Mr. Bell never entertained the views which have been attributed to them.* If Mr. Mayo shall again aim at correcting this system, let him represent it in a manner that we may recognise it: hitherto he has only wasted his shafts by shooting at something of his own creation.

We have a very convincing proof that it is not from him that we can at present take the representation of Mr. Bell's system or classification. He conceives that he has discomfited Mr. Bell's arrangement of the nerves, and yet it is singular that he does not even allude, in the whole course of his work, to the main and principal class, viz. that of the spinal nerves and the 5th pair! There is not a single hint of Mr. Bell having held any opinions respecting the nature and functions of these nerves.

It is respect for the character of your Journal which alone makes me proceed with this subject.

It is well known to every one who has attended to the history of these discoveries, that the opinions which Mr. Bell holds concerning the superadded system had their origin in those which he entertained of the regular or symmetrical system: that is, the spinal nerves and 5th pair. It was only when he had ascertained what their precise functions were, that he was enabled to investigate the others. Taking the nerves of the face, for example, he said that the 5th pair resembled the spinal nerves; that is, it has two roots, and it consequently has two functions: it has motion and sensibility. But he observed that it was limited as a motor nerve to those actions only which are connected with chewing and feeding. There is another nerve in the face, viz. the portio dura: this does not interfere with the motions of chewing, but commands exclusively a different class of muscles. The question to be resolved, therefore, is, why should the muscular part of the 5th be confined to mastication, and why should the portio dura be confined to the muscles of the face? Why should not a spinal nerve be all sufficient, just as in the arm or leg, to control both the jaws and the features? Every person accustomed to look upon the framework of the human body as affording proofs of design, must grant that there is here a difficulty to be resolved. I do not presume to express any opinion as to the justness of Mr. Bell's explanation, and I do not choose to attempt, within these short limits, to present what I conceive to be his views. But it can be seen, from the beginning, that he considered the actions of chewing were

different from those which characterised the features. The 5th, being one of the symmetrical system, he conceived to be a nerve "common" to all animals that have locomotion and sensation, and which require to grasp, to feel, and to consume their food. It is a nerve which is found in all creatures, whether they have a concentrated apparatus for breathing or not. We may see that he even thought that a ganglion and nerves analogous to the 5th might be recognised in the vermes, supplying their mouth. The portio dura he included in a different class of nerves from the 5th. He seems to have conceived that, when respiration by lungs was added to the original simple structure of animals, the nervous system underwent a corresponding change. This complicated organ of respiration by lungs makes new nerves be required, to combine many parts that are distant with the motions of the lungs. And the portio dura, he conceived, arose from a particular part in the brain, in combination with other nerves, to connect the features, and especially the nostrils, with the motion of the lungs.

No friend to science can object to the general doctrine proposed by Mr. Bell being criticised: it was to be expected that differences of opinion would arise: but let not the facts be disturbed; let us acknowledge that all these have been correctly stated. If any other doctrine be proposed, it must embrace the explanation of these facts. When representing his general doctrine, it is common courtesy that his words should not be changed.

Your readers will join with me in expressing some wonder that the claims of Mr. Mayo should require discussion at this late period of time; for it is nearly nine years since Mr. Bell presented his first paper to the Royal Society. The cause of the delay is to be found by referring to Mr. Mayo's method of proceeding. He commenced his connexion with this subject by writing a review of that first paper. His criticism was of the most sweeping and condemning nature. Nothing escaped, except one point, viz. an experiment on the infra-orbital nerve, which, it is remarkable, Magendie (who repeated Mr. Bell's experiment) had previously shown to be inaccurate, and which Mr. Bell himself has allowed, in his last paper, to be the only thing which has been corrected. With regard to this experiment, Mr. Mayo has said that the inference which Mr. Bell drew from it was the only correct thing in the whole paper; but he adds, it is only an "experimental confirmation of an opinion which, at the beginning of the eighteenth century, occurred to Dr. Blair, on his minute examination of the

proboscis of an elephant, viz. that the infra-orbital nerves are *nerves of touch*." Having written this review, Mr. Mayo proceeded to publish on the Nerves, but he avoided referring to Mr. Bell's opinions. His second paper was on the functions of the portio dura, the 5th pair, the spinal nerves, and the resemblance of the 5th pair to the spinal nerves. From this paper no one could discover that Mr. Bell had been engaged on these subjects at all. It was not till he published the "*Outlines of Physiology*," in this year, 1829, that he again returned to the attack on Mr. Bell's system, and explained how it was he had proved it to be erroneous.

It becomes necessary for me to consider what were some of the remarkable circumstances contained in that paper which Mr. Mayo criticised. It is not, as the reviewer represents, a paper on the "superadded or respiratory nerves," but it is "an account of some experiments on the nerves, which lead to a new arrangement of the system." It contains an arrangement of all the nerves of the body. It is principally occupied in contrasting the symmetrical system of nerves with the respiratory system. There are examples given of both these classes, the one as the 5th pair, the other as the 7th; and these stand, as it were, the representatives of the two great classes.

Yet it is not from what is said concerning the particular functions of each individual nerve that the paper derives its chief interest. It is the *new principle of investigating the nerves* which is there proposed. Mr. Bell announced, for the first time, that nerves are not all equally capable of bestowing the same powers, but that each nerve had its own appropriate function to perform. He cut across one nerve, and the sensibility was destroyed, although another nerve remained to supply the same part; he cut across a second nerve, and, although the sensibility remained entire, the muscles were rendered completely paralytic. He said, "No organ which possesses only one property or endowment has more than one nerve, however exquisite the sense or action may be; but, if two nerves, coming from different sources, are directed to one part, this is the sign of a double function performed by it." The nerves of the animal frame are complex in proportion to the variety of functions which the parts have to maintain." (P. 7.) It was this new principle which, in the eyes of all Europe, I may say, was regarded as the remarkable feature. The reviewer, however, has failed to notice this. It was this new principle, illustrated with examples, which created a new era in the

investigation of the nerves. After this, crowds of experimentalists, with scalpels in their hands, guided by this new principle, were joined together in the pursuit of distinct functions of the nerves.

But the classification of the nerves is another remarkable feature of the paper. In accordance with the new principle, he pointed out that all the nerves which have two roots have also two separate functions; and he classed together the 5th pair and the spinal nerves, as all possessing the same characters. As to those nerves which have only single roots, he separated them into another class, and showed that they possessed distinct and appropriate powers. If we be led to inquire what the experiments were which authorised him to announce this principle and this classification in the first paper, we shall find that it was not from those few experiments which are related that he could have arrived at his conclusions. All who are acquainted with the subject know that he had made numerous experiments before presenting this paper; and perhaps the most remarkable were those which he made on the roots of the spinal nerves in 1809, and in March 1821.

To this first paper, then, with its principles and classification, Mr. Mayo was hostile from the beginning. He took the par vagum, and, by his experiments on it, seemed to wish to cast a ridicule upon the subject. Objecting to the classification of those nerves which have two roots and a ganglion, (that is, of the 5th pair, with the spinal nerves, according to Mr. Bell,) he says, that the par vagum may be included among them. I do not deem it necessary to point out to anatomists that there is no correspondence in the roots and the ganglion (if it be one) of the par vagum with these parts in the spinal nerves and the 5th pair. But what analogy do his experiments prove to exist? Mr. Bell divided the 5th, and sensation was gone wherever that particular nerve was distributed. Mr. Mayo did not divide the par vagum across, but, to prove that it was the nerve of sensation, he *pinched* it, and "the animal gave violent indications of pain." He did not think it necessary to cut it across, and see whether the stomach, the lungs, the œsophagus, the parts to which it is distributed, lost their sensation!

I may now ask the question, if, after rejecting all that was laid down in Mr. Bell's first paper, Mr. Mayo ought to take advantage of the same principles, the same classification, and the very same facts, which are contained in it, without referring to the name of the discoverer? In the

second paper which Mr. Mayo wrote, he selected the portio dura, the 5th pair, and the spinal nerves, to be the subjects of his investigation, and yet he does not once mention Mr. Bell's name.

The reviewer has said that Mr. Mayo proved that the "ganglionless" portion of the 5th pair is the nerve of motion; that this root is distinct in function from the one that has a ganglion upon it. It was Mr. Bell who first established that nerves which have double roots have two distinct functions. He first made the contrast between a nerve, such as the portio dura, which has only a single root and no ganglion upon it, with another, such as the 5th pair, which has two roots and a ganglion on one of them. It was he also who pointed out the importance of a ganglion, by showing that, in the 5th, for example, all the nerves proceeding from the ganglion over the whole head are endowed with sensibility. It was to him we owe the knowledge of the fact that certain branches of this nerve, limited to the jaws and lips, had motion combined with sensation. In explanation of this double character of the 5th, Mr. Bell said that its roots were double, like those of the spinal nerves; that it had a ganglion, and that "some filaments pass onwards without entering the ganglion." Now, it was upon these filaments which pass the ganglion that Mr. Bell conceived motion depended, although he may not have said so in "so many words," as the reviewer expresses it. Indeed, it will be found that the only satisfactory proofs by which the truth can be demonstrated, that the 5th is a motor nerve at all, were advanced by him.

We have seen that Mr. Mayo rejected the explanation of Mr. Bell, that nerves which have double roots are for motion and sensation: I must beg to remark, that it is only by depending upon the truth of this principle that his conclusion can be justified at all. The strict anatomy of the origin of this nerve by two roots, and the course of those filaments which pass the ganglion, were long ago well known to anatomists. To prove this, see the writings of Wrisberg, Santorini, Soemmering, Paletta, Prochaska, Meyer, Pfeffinger, Martin, Gunther, Haase, Vicq d'Azyr, and Scarpa, who described the anterior root mingling with the third division, and with it alone.\* But it never occurred to any of these eminent anatomists, that the one root was exclusively the nerve of motion, and distinct from the other. Paletta made the conjecture, but none who followed

\* See the last edition of Mr. Bell's *System of Anatomy*, vol. ii.

put faith in it: he thought that this root was a motor nerve to the muscles of the jaws and cheeks, just as the 3d is the motor to the muscles of the eye. The distribution of this part of the nerve to muscles alone could not, however, suggest a distinction between it and the ganglionic portion, as they are joined together, and the branches of the latter are as profusely supplied to the muscles of the face as those of the former to the jaws. It follows, then, that experiments were wanting. Mr. Bell proved, by direct experiments, that the filaments of the spinal nerve which pass the ganglion, that is, the filaments which correspond with the ganglionless part of the 5th, constitute that root which alone bestows the power of motion upon the spinal nerve. Again, having deduced from the anatomy that the 5th resembled the spinal nerves, experiments were made which proved that the third division of the 5th pair alone, of all this widely distributed nerve, bestowed motion. Now, it was after such proofs were supplied in the writings of Mr. Bell and of Mr. Shaw, that Mr. Mayo published his second paper. Yet he did not refer to the above experiments, either those upon the spinal nerves or those upon the third division of the 5th, however much they tended to illustrate his conjecture. This, it will be seen, places great restraint upon his readers, because the experiments upon all the branches of the 5th which he enumerates, (that is, four, or perhaps more, in number,) *prove that it is not in any respect a motor nerve*. In the experiments to which he refers, the branches of the 5th, which go profusely into the muscles, were proved to possess *no* power of drawing the muscles into action. The 5th could only be known, by the experiments referred to, to be a nerve of sensation, and nothing more.

The remarkable difference between Mr. Bell's method of proceeding, and that which Mr. Mayo pursued, in investigating this point, consisted, as your readers may have already seen, in this: Mr. Bell made his experiments on the roots of the spinal nerves before directing his attention to the 5th pair; while, on the contrary, Mr. Mayo went to the 5th at once, and then was directed to the spinal nerves.\* It was by judging from the analogy between the 5th pair and the nerves of the spine that Mr. Bell was prepared to attribute to the 5th similar functions to those possessed by the spinal nerves. To prove that he had made experiments on the roots of the spinal nerves, I may refer to a paper by

\* See No. ii. Anat. and Phys. Comment., Outlines, &c.



Mr. Shaw, read before the Medico-Chirurgical Society, in April 1822, in which the first experiments by Mr. Bell (those performed in 1809) are described; and to another paper published in this Journal in October 1822, in which he describes experiments on the spinal nerves, which were made publicly in the School of Great Windmill street, in March 1821. Both of these series of experiments contain convincing proofs of the anterior "ganglionless" portion of the spinal nerve being for motion. Mr. Mayo pursued an opposite course, I have said: he first directed his attention to the 5th pair, and then he formed his conjectures of the spinal nerves. He says that, reflecting on the analogy of the roots of the spinal nerves with those of the 5th pair, as it has been observed by Soemmering, he was led to think that the one root of the spinal nerve belonged to motion, and the other to sensation. "When I was engaged in experiments to determine the fact, M. Magendie's were published, which establish the justness of my conjecture."\* But this paper was not published till July 1823.

I have said that Mr. Bell was engaged in experiments upon the spinal nerves before he made his experiments on the 5th pair; and I have said that he deduced his opinions concerning the functions of the 5th pair from these experiments. Now, this will not appear from the account which Mr. Mayo has given of the result of the experiments made by Mr. Bell: no more will it appear from what the reviewer has said. I had formerly to complain that they did not make use of Mr. Bell's own expressions, in pointing out his opinion of the 5th pair and of the portio dura: now I have to complain that they make extracts from an essay which was *never published*, and fix Mr. Bell's opinions of the spinal nerves to what he then said, more than twenty years ago. They seem to regard as of no consequence those opinions of the spinal nerves which he gives in his first *published* paper. This has led them both into great inconsistencies. The reviewer confounds the reader by making two references, one to the unpublished pamphlet of 1809, and another to the paper in the Philosophical Transactions of 1821. He does not seem aware either of the injustice or of the contradiction which is consequent upon this; inasmuch as in the first he gives *ten or a dozen* functions to the spinal nerves, and in the latter only *two*. It is for the purpose of showing how incorrect Mr. Bell's experiments on the roots of the spinal nerves were, that he

\* Anat. and Phys. Comment. No. ii. p. 10.

refers to the unpublished paper, and says, that he considered "that the anterior roots, or fasciculi, of the spinal nerves were the organs of consciousness, of thought, feeling, and volition; and that the posterior roots regulate the secret, organic, or automatic functions of the body, secretion, growth, the sympathies of the parts, and the like." When he refers, however, to Mr. Bell's first published paper, and speaks of the classification of the spinal nerves and 5th, he let us see, without any explanation, that these functions were reduced only to two, viz. *muscular power* and *sensation*! Not startled in any way by this contradiction, we find, in a subsequent part of his review, that he removes all the merit from Mr. Bell for his discoveries in the spinal nerves, and confers it upon M. Magendie, although the latter made no experiments upon these nerves until Mr. Bell's paper was more than a year before the public. "We attribute this great discovery (that is, of the distinct functions of the roots of the spinal nerves,) entirely to Magendie. It is childish in any other physiologist to advance a claim to it." The little essay which the reviewer has got into his possession, and from which he has made extracts, was, as he himself informs us, printed *twenty* years ago, and was *circulated among Mr. Bell's private friends*. It bears on its title that it was an "Idea of a new Anatomy of the Brain, submitted for the observations of his friends;" and it was never published. Having perused that essay, I do not feel inclined to grant that Mr. Bell did really entertain those opinions which are attributed to him, even at that time. Quotations might be given to prove that these opinions are inconsistent with many passages in this work. There are speculations, however, concerning the functions of the cerebrum and cerebellum, which, being connected with the experiments on the spinal nerves, may give rise to some dispute about what his real opinions were at that distant period. But let the statements of the observations made during the experiments be kept detached from these speculations, and we have presented to us a series of most important facts. It is needless, however, to discuss about the contents of this work: it was not written for the public; and when Mr. Bell published his views, if he entertained those erroneous notions, he must have afterwards rejected them. We have, indeed, his own authority for saying that he did abandon these investigations into the functions of the cerebrum and cerebellum, and that he confined himself solely to the nerves proceeding from them.\* There is surely

\* See a letter in the Medical Gazette, May 1829.

an impropriety, therefore, in extracting opinions from that work, and attributing them as the most approved which he has given, when they are found to be perfectly inconsistent with what he has *published*. The only use that can with fairness be made of this essay, is to show how the author has improved his opinions from the year 1809, rejecting what was bad, selecting what was good, and extending his knowledge of the system. It is strange that Mr. Mayo should believe that Mr. Bell always held these opinions about the spinal nerves possessing so many separate functions; for when he attempted, as we have seen, to prove that the par vagum was like one of these spinal nerves, he considered it sufficient, in order to establish the resemblance, to prove, by experiment, that it was only endowed with *motion* and *sensation*.

But that other experiments on the roots of the spinal nerves, besides those which are alluded to, were made during the interval, when the reviewer says "the subject slept for awhile," we may learn from your own Journal for October 1822. The experiments are described there which were performed in March 1821; that is, five months before the reading of Mr. Bell's first paper to the Royal Society. Now, the same objections cannot be applicable to them as to the former, since no mention whatever is made of the cerebrum and cerebellum. The notes of Mr. Shaw, together with those of one of the most intelligent of the pupils who assisted, prove that, "upon irritating the posterior roots of the spinal nerves in three or four places, no effect was produced upon the neighbouring muscles; but, when the anterior root singly, or the whole spinal nerve, was pinched by the forceps or pricked by the scissors, an evident motion was produced on the muscles, not only perceptible to the eye, but, when the third or fourth dorsal nerve was touched, the whole scapula moved in the hand of the assistant. This motion was not communicated to the muscles when the ganglion which is formed on the posterior root within the sheath was touched: neither did it follow an injury of the posterior column of the spinal marrow."

But, to close my evidence that there was no reason for Mr. Mayo or the reviewer fixing these erroneous opinions concerning the roots of the spinal nerves upon Mr. Bell, I may refer to the paper by Mr. Shaw, published in the Medico-Chirurgical Transactions, and read in April 1822. Although much is said in that paper of Mr. Bell's views of the spinal nerves, nothing can be found which at all coincides with the false opinions ascribed to him; but there is a

great deal which proves how it was that he came to reduce the number of functions to two. I must, in particular, direct your readers to the last division of his paper, where the question is discussed, "*Why sensation should remain entire in a limb when all voluntary power over the actions of its muscles is gone, or why muscular power should remain when feeling is gone.*" The explanation of these phenomena could not be more accurately given, even if the question were to be discussed in the present day. It may, perhaps, afford additional interest to this paper, to know that it was published not only before Mr. Mayo was about to make the discovery of the roots of the spinal nerves, but before Magendie's repetition of these experiments had been brought to this country.

But, even after reading these various accounts of experiments upon the spinal nerves, proper justice cannot be done to Mr. Bell, without at the same time showing what were the nature and object of his experiments on the 5th pair and the portio dura. His experiments upon the spinal nerves could not be considered complete until the 5th pair in the head, which has a ganglion upon the root corresponding with the posterior root of the spinal nerve, was shown to be the only nerve of sensation to the head. It is obvious that the experiments upon the roots of the spinal nerves must necessarily be attended with doubt, when the object is to ascertain the degree of sensibility possessed by the different roots. Mr. Bell has always said that he relied upon his experiments on the nerves of the face for establishing the true nature of the posterior roots which have ganglions upon them. As to the anterior "ganglionless" roots, these are the only ones of which he had formerly been perfectly sure. It is strange that, notwithstanding the care with which he has always limited the function of the anterior roots to motion, it is alleged that he believed *sensation* was one of its functions. It does not seem to be known that this opinion belongs only to M. Magendie. He, trusting exclusively to the experiments of breaking up the bones of the spine, and exposing the spinal marrow, and ignorant of the analogy of the 5th, came to this conclusion, that the anterior roots bestow the power of motion, and *are also endowed with sensibility to a certain degree* :\* which conclusion, however, as it has been obtained by a method of inquiry apt to lead into errors, we may put little faith in. It tends only to show that the reviewer and Mr. Mayo have been

\* See the last paper in the first vol. of his *Experimental Physiology*.

somewhat negligent in their endeavours to adjust exactly what belongs to Mr. Bell, and what belongs to the other physiologists who followed him in these important investigations.

I am your obedient servant,  
AN OLD PUPIL OF WINDMILL STREET.

We should tax our readers' patience too severely, if we were to comment upon every part of the preceding prolix statement. It will be sufficient for our purpose to try what the thread of the "Old Pupil's" argument is made of, by straining it at a few points. We shall soon see whether it be of unsound materials or not.

1. "Mr. Bell," says the letter-writer, "was of opinion that the lips had a power of motion in combination with the actions of chewing, and he was led to attribute this to the influence of the infra-orbital branch of the 5th."—Why, this is one of the main points we have laboured to establish. This is exactly where we say that Mr. Mayo set Mr. Bell right. Mr. Mayo showed that the infra-orbital nerves have nothing to do with motion. He proved, in opposition to, and in correction of Mr. Bell, that, as it regards the facial muscles, the portio dura is the exclusive motor nerve. If the reader wishes to know of how much importance this discovery of Mr. Mayo's then was, let him turn to vol. xii. part i. of the Medico-Chirurgical Transactions: he will there see the system of *false* pathology which grew out of Mr. Bell's theory expounded by the late Mr. Shaw; and cases stated (similar to one described by Mr. Bell,) in which, the portio dura being affected, motion was *seen to be lost in the facial muscles on those occasions only when they acted as respiratory muscles; to be perfect when they acted as chewing muscles!* When a patient, in whom the portio dura was affected, "blew, or attempted to whistle, the air escaped by the right angle of the mouth," &c. "*On exciting those actions, which, by experiments on animals, we had proved to depend on the 5th pair of nerves, they were all found perfect; i. e. the patient could bring the orbicularis oris into such action as to hold a pencil with it!*" &c.\* In another case of a parallel description, "on observing the action of the muscles while the lady was eating, I did not perceive," said Mr. Shaw, "any power deficient; but the moment *she smiled or laughed*, there was distinct paralysis!"

\* Medico-Chirurgical Trans. vol. xii. part i. p. 111.

2. "Mr. Mayo," the 'Old Pupil' observes, "has said that he corrected Mr. Bell for saying that this branch of the 5th (the frontal) was a nerve of voluntary motion and sensation; yet he has never related any experiments to prove whether that opinion be correct or not!"

We turn to Mr. Mayo's Anatomical Commentaries, part i. p. 110: "Some days after this, the *frontal nerve was divided*," says Mr. Mayo, "on one side of the forehead of the same ass; when the neighbouring surface appeared to have lost sensation, but its muscles were not paralysed!"

We do not attribute to the "Old Pupil" deliberate misrepresentation in this instance. He probably supposed that Mr. Mayo had not made any such experiments as we have shown he had made. But we lay our finger upon this point, as one out of repeated instances in which the writer of the "Reply" endeavours to turn the reader's attention to some smaller question, and to divert us from the broad and general fact, that Mr. Mayo established *that all the facial and other ganglionic branches of the 5th are nerves of sense alone*.

3. We gave it as our opinion in the review which has drawn forth the foregoing "Reply," that it was Mr. Mayo who had ascertained the true nature and distribution of the ganglionless part of the 5th. Hear what Mr. Bell's advocate says in answer to this, in favor of that gentleman's claim to this discovery. "It was upon those filaments which pass (below) the ganglion that Mr. Bell conceived motion depended, *although he may not have said so 'in so many words,' as the reviewer expresses it.*" Indeed! Are we really to believe that, when Mr. Bell attributed *motive power* to a *ganglionic* part of the 5th, (namely, the infra-orbital nerve, in which every body knows, and knew, no ganglionless filament is involved,) that he had any notion that the *ganglionless* part of the 5th was the *exclusively motor portion*.

4. The "Old Pupil" asserts that "the reviewer confounds the reader by making two references, one to the unpublished pamphlet of 1809, and another to the paper in the Philosophical Transactions of 1821. He does not seem aware either of the injustice or of the contradiction which is consequent upon this, inasmuch as in the first he gives *ten or a dozen* functions to the spinal nerves, and in the latter only *two*." Our respondent is mistaken: the contradiction exists only in *his statement* of our opinions. Mr. Bell, we asserted, and re-assert, in 1809 attributed to the agency of the spinal nerves sense and motion, and various automatic influences in addition. We have nowhere asserted that

he has ceased to do this now. On the contrary, we believe that he continues in this persuasion. All other physiologists, at least, are of opinion that the spinal nerves exert this triple function, and consider them not merely as organs of consciousness, but likewise to exert an influence in growth, secretion, and the like. In 1809, Mr. Bell, as we have shown, supposed the anterior or ganglionic roots of the spinal nerves to be nerves both of sense and motion. His advocate, however, implies that, before M. Magendie's experiments were published, Mr. Bell had changed his first opinion, and adopted the belief that the ganglionless portions of the nerve were for motion alone, the ganglionic for sensation alone.

Now, in the first place, it is not very likely that Mr. Bell concluded that the ganglionic roots of the spinal nerves were for sense alone, at the time when he published his opinion, backed by experiment, that a large part of the ganglionic branch of the 5th (the infra-orbital) was for sense and motion jointly. The letter-writer adverts continually to Mr. Bell's parallel between the 5th and spinal nerves: that parallel had been drawn before, and most strikingly, by others. Yet Mr. Bell's adoption of it gives force to the preceding argument against his knowledge of the functions of the two roots of the spinal nerves antecedently to Magendie's experiments. Mr. Bell *strictly* compares together the 5th and the spinal nerves; and it would be a strange mode of arguing to deduce from his imperfect knowledge of the functions of the one, his perfect acquaintance with the functions of the other. Mr. Bell certainly did not publish any definite and correct ideas of the distinct functions of the anterior and posterior fasciculi of the spinal nerves before Magendie, and, to an unprejudiced mind, the following extract from the paper of 1821 must thoroughly establish that he entertained none. "The 5th and spinal nerves agree in these essential circumstances: they have all double origins; they have all ganglia on one of their roots; they go out laterally to certain divisions of the body; they do not interfere to unite the divisions of the frame; they are all muscular nerves, ordering the voluntary motions of the frame; they are all exquisitely sensible, and the source of the common sensibility of the surfaces of the body. When accurately represented on paper, they are seen to pervade every part; no part is without them; and yet they are symmetrical and simple as the nerves of the lower animals."\*

\* Phil. Trans. 1821.

We will not pursue the arguments of the "Old Pupil" any further. When, upon the principal points in discussion, so much weakness is shown, we may well be excused for not inflicting upon our readers a detailed answer to the less important statements contained in the above letter. If we discover, said Samuel Johnson, one part of a line to be of worsted, we do not expect the remainder to be of silk.

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## HOSPITAL REPORTS.

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### ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

#### *Report of Cases of Diseases of the Eyes.*

(Concluded from p. 524.)

CASE VII. October 20th, 1829.—Peggy O'Donnell, æt. twenty-six, of sanguine temperament; appears in good health, with the exception of her eye. Reports that, about a month ago, she received a slight blow upon her left eye, which was immediately followed by an unpleasant and painful sensation. The pain increased, and redness of the anterior part of the eye ensued. She applied, of her own accord, four leeches one day, and two another day, and cold bread and water poultice. The leeches produced some relief, but the poultice none at all.

At present the eye appears irritable and considerably inflamed. The vessels of the conjunctiva covering the sclerotic are so much gorged with blood, as to give it the appearance of a dark pink patch. The cornea is muddy, and at its superior portion there is a pink patch, about the size of the white of the thumb-nail, having in its centre a few pustules. Vision is very obscure; can merely distinguish the shade of bodies. Has some pain in the eye during the day, but feels it very acute when she becomes warm in bed.—Habeat Sp. Terebinth. ʒi. ter de die.

22d.—Inflammation less; feels the eye improved and more comfortable.—Cont. medicam.

24th.—Improving. Cont. medicam.

25th.—Cont. Sp. Terebinth.

27th.—Can see a little better. Cornea more transparent; vessels less distended with blood; eye irritable.—Cont. medicament. Applic. vesicat. pone aurem sinistram. Pone in ocul. Vin. Opii gtt. ij.

31st.—Repetatur Sp. Terebinth.

November 3d.—Considerably improved. Inflammation and irritation very much decreased.—Cont. medicam.

12th.—Cornea clearer; no pain of eye; sees and feels better. Medicine has produced a desire to make water more frequently.—Habeat Sp. Terebinth. ʒi. bis de die; et Decoct. Hord. c Pulv. G. Arab. et Sacch. ad libitum.



15th and 17th.—Continue.

19th.—Cornea almost clear, sight very much improved; no pain or uneasiness. Feels no irritation in the urinary organs; pulse regular; conjunctiva natural.

21st.—Cured.

Case by RICHARD TUTHILL, M.D. Assistant Surgeon 52d Light Infantry.

CASE VIII.—Sarah Strickland, æt. twenty-eight; admitted October 22d, 1829, with interstitial abscess of the cornea.

A large interstitial abscess at the lower and inner part of the cornea of the right eye; anterior chamber cloudy; high sclerotic inflammation; great pain in the ball of the eye and forehead; vision very defective. The inflammation has existed about a week. Does not know any cause.—Cucurb. cruent. ad ℥ij. de temp.—R. Antim. Tartar. gr. ij.; Magn. Sulph. ℥ij.; Aq. fervent. ℔ss. Dissolve; sumatur 8vam partem omni horâ, si non excitat nauseam, antiquam dosem tertiam, sumatur doses duas omni horâ.

23d.—The cupping relieved the pain. The medicine did not excite nausea.—R. Pulv. Ipecac. gr. xv.; Antim. Tart. gr. ij. M. fiat emeticus statim sumend.

24th.—Emetic operated well. Complains of a severe darting pain in the eye and brow, returning several times a day. Abscess appears ready to point; sclerotic inflammation is on the decline. Says she sees a little better.—Cucurb. cruent. ad ℥ij. R. Antim. Tartar. gr. ij.; Magn. Sulph. ℥i.; Aq. fervent. ℔ss. Solve, fiat mist. ut antea sumend.

25th.—Pain is not so severe, neither does it occur so frequently. Medicine caused a slight degree of nausea.—Repet. medicamenta.

26th.—The pain is not so violent; thinks she sees clearer. The collection of matter is evidently disappearing. Medicine does not nauseate, but it purges.—Cont. medicam.

27th.—Medicine does not nauseate, though it causes purging, and makes her feel very faint. Much freer from pain; can bear the light more easily; thinks she sees better.—Cont. medicament.; sumatur 8vam partem omni horâ et semisse.

28th.—Medicine does not nauseate. Complains of pain in the eye and head during the night. Vessels of the sclerotica are more injected, and much more numerous, of a reddish pink colour; great lachrymation, and intolerance of light. The collection of matter appears stationary.—Cucurb. cruent. ad ℥viij. de temp.—R. Antim. Tartar. gr. iij.; Magn. Sulph. ℥i.; Aq. fervent. ℔ss. Solve, et sumatur 8vam partem omni horâ et semisse.

29th.—Free from pain; is a great deal better. The matter is being rapidly absorbed. Medicine excited considerable nausea this morning.—Cont. Antim. Tart.

30th.—Medicine continues to nauseate. Eye feels stronger.—Repet. medicam.

31st.—Repet. medicam.

November 1st and 3d.—Repet.

5th.—Is entirely free from pain, and altogether better; eye feels stronger, and she sees better. Matter is being fast absorbed. Sclerotic inflammation has nearly disappeared. The inflammation of the lids still exists, but is not so severe. Medicine continues to keep up a state of nausea and faintness, as well as purging, though the Antim. Tart. has been diminished for the last two days to two grains.—Rep. med. sum. 8vram partem 2dis horis.

7th.—Sees nearly as well as ever. There is a speck left in the place in the abscess.—Hydr. Subm. gr. vi. h. s. s.—Magn. Sulph.  $\frac{3}{4}$ i. mane.

10th.—Relapse. Sclerotic inflammation has returned in a severe degree; lids even more inflamed; cannot open her eye; vision very imperfect.—Appl. Ung. Argent. Nitr.

12th.—Says that the pain excited by the ointment was very severe. Can see much better, and open her eye easily; free from pain; sclerotic inflammation is much relieved; the inflammation of the lids exists in a high degree; speck appears rather less.—App. Ung. Arg. Nit. Hyd. Subm. gr. iv. omni nocte.

14th.—Is a great deal better; sclerotic inflammation has disappeared.—App. Ung. Arg. Nitr. Inf. Sennæ mane.

17th.—Nearly well; speck has nearly gone.—Ung. rep.

19th.—Returned the letter. To use the Gutt. Arg. Nitr.

Case kept by Mr. FOOTE.

#### BALTIMORE ALMSHOUSE INFIRMARY.

#### *Aortal Aneurism, with Rupture into the Trachea and Oesophagus.* By THOMAS H. WRIGHT, M.D.

HENRY M'CLASKEY, age fifty-four, short stature, form muscular and heavy, with marks of great natural strength. The leading symptoms, at the time of admission, were cough, and a constant sense of weight in the chest, increased on exercise, and causing labour of breathing after any considerable effort. The cough was hoarse and dry, without expectoration, not very frequent, not commonly excited or increased by deep breathing; the sense of weight in the chest constant, rather disagreeable than distressing, and not at all impeding lying down or walking about moderately. The patient represented his present symptoms to have come on about three weeks before, previous to which he was, or believed himself to have been, in good health; had been seldom sick, led an active life, and was free from cough or other disorder.

There was no fever. Examined for many days together, the pulse betrayed no sensible fluctuation; it was sixty-five to seven, soft without volume, requiring pressure to distinguish it well, and not resisting with any energy of stroke; it was both a weak and sluggish pulse, though the latter is usually characterised by some force. The general state of the system corresponded with the

torpor of the circulation: the man kept his bed, was silent, and seemed indifferent to every thing about him; his usual position supine, countenance dull and drowsy. When asked respecting his state of feeling, complained of annoyance by his cough, and of the sense of weight in his breast; spoke little, rather abruptly, and always in terms implying despondence of getting better.

There were in this case but faint indications for diagnosis,\* or prescription. Chronic pulmonary embarrassment was suspected, but of what particular character was uncertain. No leading indication presenting, a palliative course only was prescribed. For many days the patient remained as when admitted. He ate all that was given him; slept great part of every night, and frequently in the day, yet always expressed himself uncomfortable, and denied any improvement in his sensations.

Diarrhœa was prevalent in the infirmary when this man was received, and in a week after his admission he was affected by that disorder, which caused him much inconvenience, and seemed to aggravate his cough; chiefly, perhaps, by causing him to leave his bed frequently, to go to the privy. One morning, in the fourth week of the man's stay in the infirmary, while we were making the usual tour of medical duty through the ward, he came out of the privy closet, (a small apartment at the end of the ward,) and ran toward his bed, coughing very hard. In the next moment the sound of violent vomiting was heard, which caused us to repair instantly to the spot. M'Claskey was lying on the side of his bed, vomiting blood in torrents, and was lifeless in ten seconds.

*Examination.* No extravasated blood in the general cavity of the thorax. The right lung extremely dilated, filling the whole right cavity of the chest, of a deep purple hue, and engorged to the utmost possible degree, not from vascular congestion, but complete injection with blood of all the bronchial passages and cells, to their minutest divisions: no artificial inflation of the lung could possibly have caused a more perfect display of its expansive capacity. The left lung was not at all dilated, and exhibited no unusual colour.

The heart, viewed in situ, gave but a very partial representation of the nature of the lesion; some appearance of a pouch only presenting just beyond the arch of the aorta. The trachea and œsophagus were divided above and brought down, the membranous connexions around the thorax and to the spine separated, and the heart and lungs taken out together. Being now inverted, the state of the parts was readily traceable. At the deepest posterior part of the arch of the aorta, an inch and a half below the root of the left subclavian, was an aneurismal sac, the size of an egg; its parietes

\* It proved afterwards that the stethoscope (which I have to acknowledge the error of neglecting to employ in this obscure case,) must have plainly revealed, at least, one decided character of lesion in part of the thoracic organs.

soft, and apparently very thin. This was plainly the source of the hemorrhage, and, to trace its communications, the sac was slit open through its greatest length. The coats of the artery (within the limits of the sac) were very thin and tender, and tore rather than cut, when laid open: the sac was empty, except a few delicate layers of soft coagulable lymph. Passing the finger into the sac, it encountered three or four hard, rough, pointed bodies, on each side, within the aneurismal cavity, which were the extremities of three broken rings of the trachea: the points were thin and sharp, as if wasted, and had a roughness, hardness, and brittleness, more of bone than cartilage. The communication with the trachea, and the cause of bloody insufflation of the right lung, were thus explained: it remained to ascertain why the fatal hemorrhage had occurred in the form of a violent and repeated gush by vomiting. When the œsophagus was now detached from the trachea behind down to the borders of the aneurismal sac, it was found to be united by adhesions both with the diseased portion of the trachea and a part of the aneurismal bag. A further separation of the œsophagus from the trachea disclosed an oval opening in the former, large enough to admit the point of a finger, by which the œsophagus communicated with the trachea, just behind where the rings of the latter had given way, which was pretty low on the left side of the trachea. The coats of the œsophagus were very much attenuated over the whole extent of its adhesion to the trachea and sac, and the rent described communicating directly with the current flowing into the trachea after rupture of the rings; the blood seems to have passed freely also by the route to the stomach. Hence its discharge by distinct acts of full vomiting. The stomach contained, after death, about a pound of coagulated blood.

It has been mentioned that the left lung was not dilated, or changed in colour, &c. The cause of this difference in the two lungs was explained while removing the parts from the cavity of the chest. The left lung was found to adhere with great firmness throughout its whole anterior, lateral, and posterior surface, to its own pleura, and by that to the serous membrane of the ribs. The lung was enlarged very much, firm and heavy, and in its whole substance hepatized to so great a degree that every trace of bronchial tubes and cells was wholly obliterated up to the point where the left bronchus penetrates the lung by its primary branches. From this point there was no channel by which air could enter the lung; and, for that cause, the extravasated blood was totally excluded.

This lung had evidently been long out of the service of breathing, and, as its cohesion and condensation was clearly the work of inflammation, and that probably of no indolent character, it is inexplicable how the unfortunate subject of the case could have been so unconscious as he appeared of any former morbid state of his lungs, and so fully impressed with the belief that his health was perfect till within four weeks of his coming to the Almshouse.

The case, in this respect, adds another to the numberless admonitions, derived from hospital practice especially, how little confidence can be placed in the account which patients give of their general state of health, even where there is no reason to suppose the smallest intention to deceive. It was to the state of the left lung, as represented, that allusion was made, when it was remarked that the stethoscope might have clearly indicated one important feature of diagnosis, in the investigation of the seat, &c. of lesion about the thoracic textures. The respiratory murmur (indeed every sound which respiration gives by mediate auscultation,) was, of course, wholly extinct over the entire front, side, and back surface of the chest, corresponding to the outline and body of the left lung.—*American Journal of Med. Sciences.*

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## CRITICAL ANALYSES.

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*Quæ laudanda forent, et quæ culpanda, vicissim  
Illi, prius, cretâ; mox hæc, carbone, notamus.*—*PERSIUS.*

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*Hospital Facts and Observations, illustrative of the Efficacy of the new Remedies, Strychnia, Brucia, Acetate of Morphia, Veratria, Iodine, &c. in several Morbid Conditions of the System; with a comparative View of the Treatment of Chorea, and some Cases of Diabetes; a Report on the Efficacy of Sulphureous Fumigations in Diseases of the Skin, Chronic Rheumatism, &c.* By JAMES LOMAX BARDSLEY, M.D. Physician to the Manchester Infirmary, Dispensary, Fever Wards, Lunatic Hospital, and Asylum; and Lecturer on the Principles and Practice of Physic, Materia Medica, and Medical Botany.—8vo. pp. 223. Burgess and Hill, London, 1830.

BEFORE we enter upon the analysis of a work, it is our invariable custom first to peruse the whole of it carefully and attentively. We do not, like some "reviewers" whom we could mention, if fraternal courtesy did not forbid the exposure, at once proceed with pen and scissors, to introduce a few flourishing sentences, to cut here and there a page from the author, and then wind up with some general expressions of gratitude, mingled with a little alloy of disappointment. In such a plan of "doing a review," there is, indeed, an attractive safety which is tempting; for, as no positive opinion is hazarded, the judgment of the critic cannot well be impugned. If the author should com-

plain, the critic may easily defend himself, for he has been grateful for his work: if the profession in general should venture to doubt the infallibility of a reviewer, he is again protected, for he was not altogether satisfied with the performance.

We find, from the preliminary examination which we have made of his work, that the task which Dr. BARDSLEY has imposed upon us is not difficult. He has indulged in no speculations, and therefore there is no room for criticism. He has collected a valuable body of practical facts relating to the therapeutic properties of certain remedies which have as yet been but little tried in this country, although their merits have been highly extolled by our continental brethren. We shall submit to our readers the results of Dr. Bardsley's experience, together with some of his most interesting cases.

The work contains cases and observations chiefly derived from the author's practice at the Manchester Infirmary; and, as a proof that this institution affords ample opportunities for the observant physician to enrich his own mind, and add to the practical information of others, it is stated "that, from the 24th of June, 1827, to the 24th of June, 1828, 16,680 of the different classes of in, out, and home patients enjoyed the benefits of this extensive charity." Dr. Bardsley has chiefly availed himself of the great advantages of his situation, by selecting for his inquiries that very important class of substances, the vegetable alkalies, for the purpose of determining their real therapeutic properties. With very laudable, and we regret to say unusual, candour, he relates unsuccessful as well as favorable results attending their use in his hands. Besides the vegetable principles noticed in the work, the author has made trial of *Picrotoxia*, *Delphia*, *Solania*, and *Lupulia*, in several affections; but they have proved useless remedies in disease, and therefore the experiments that have been made with them are not detailed.

The first subject to which our attention is directed is "the Medicinal Properties of Strychnia in Paralysis, with illustrative Cases."

The strychnus (*nux vomica*) is ranked by Linnæus in the natural order *Luridæ*; and by Jussieu, in his natural arrangement, *Apocineæ*. The tree which affords the vomic nuts of commerce grows abundantly in Ceylon, Malabar, and on the coast of Coromandel. It appears, from the experiments of various physiologists, that the action of *nux vomica* varies in its effects on different animals; that its

deleterious influence is more rapidly manifested when a portion of it is injected into the pleura, peritoneum, or jugular vein, than when introduced into the vessels remote from the heart, or applied to any of the mucous surfaces of the body; and that its action upon the system is destroyed by previously removing the spinal marrow. In animals destroyed by *nux vomica*, no marks of inflammation have been found upon dissection. It appears that it does not occasion any organic lesion, but that it has a direct action upon the nervous system, causing death from the asphyxia produced by the immobility of the chest during the violence of the tetanic spasms of the thoracic and abdominal muscles. By careful analysis, Pelletier and Caventou discovered in the vomic nut two vegetable alkalies, *strychnia* and *brucia*. The *nux vomica* has long been employed as a remedy in many diseases, but its use was almost entirely neglected until Magendie, Delile, and Fouquier called the attention of the profession to its remedial properties. Magendie established the fact, that the *nux vomica* exerts an especial action on the spinal marrow, and nerves emanating from it, as well as on the muscles which those nerves supply; and hence Fouquier was led to make trial of it in several cases of paralysis of the inferior extremities. Magendie was at the same time engaged in a series of similar experiments with the *nux vomica*, which afforded additional evidence of its value in paralytic affections. Dr. Cooke used it with varied success. Georget\* and Alibert† employed it without much advantage. The early trials of Dr. Bardsley were made with the extract of *nux vomica*, but, from the uncertainty of this preparation, he relinquished its use in favor of *strychnia*, whose action is more *certain* and *uniform*.

"CASE I. Mary Mitchell, aged thirty years, admitted 28th March, 1824.

"She has entirely lost the power of the left side, with diminished sensibility. Complains also of occasional severe headach, and is liable at times to sudden attacks of vertigo. Her articulation is much impaired. Urine and feces passed involuntarily in bed. Corner of the mouth much drawn to the right side; pulse eighty-six, rather feeble. Countenance pallid. Sleeps ill. The attack occurred about three months ago, shortly after being delivered of twins, and has gradually increased. She attributes her complaint to over fatigue and cold, when far advanced in pregnancy. Has used several remedies, but is ignorant of their nature.—Ordered

\* De la Folle, p. 502.

† *Nouveaux Elémens de Therapeutique*, tome i. p. 438.

five leeches behind each ear, a blister to the nape of the neck, and a dose of the common purging mixture of the house.

" April 1st.—Leeches bled freely, and blister discharged well, with relief to pain in the head. Several copious stools obtained from purgative. To commence with the twelfth of a grain of strychnia, in the form of pill, twice a day.

" 4th.—Symptoms unchanged. Strychnia pill to be taken three times in the day.

" 7th.—Head remains free from uneasiness. No perceptible effect from alkali.

" 10th.—The dose of strychnia to be increased to the eighth part of a grain, three times a day. Bowels regular.

" 14th.—The alkali has not as yet occasioned any manifest effect upon the system. The fourth of a grain to be exhibited three times in the day.

" 20th.—Has again complained of slight pain in the head, but without vertigo. She states that she experienced yesterday a slight sense of prickling in the paralytic members, which continued for some time after each dose of the pills. No medicine required for bowels. Leeches to be repeated.

" 24th.—Pain in the head very trifling since repetition of leeches. To continue.

" 27th.—She appears to possess much more feeling in the affected side, as well as increased power over the paralysed muscles. Makes no complaint of pain in the head this morning.—Half a grain of strychnia to be taken twice in the day.

" 30th.—On the second day after the exhibition of the alkali in this proportion, the patient experienced smart convulsive twitchings of the muscles of the diseased side. They are now present.

" May 3d.—She can move the paralytic limbs much better, and begins to feel conscious when the bladder and rectum are evacuated.—To take one grain of strychnia twice a day.

" 6th.—Head became affected with stupor and vertigo, and rigid contractions of the muscles of both sides of the body supervened to the employment of the third dose of the alkali, in the proportion noticed in the report of the 3d. This quantity, however, was repeated yesterday and also this morning, and has been unattended by the former severe effects of the medicine. The patient has regained a considerable degree of power over the leg and arm, and the tone of the sphincters of the bladder and rectum is much restored. Not deeming it prudent to increase the dose of the alkali, she was directed to continue the one-grain dose twice in the day.

" 14th.—This dose now occasions no inconvenience. To continue the strychnia in doses of half a grain three times daily.

" 17th.—She is now much better; can hold a cup to her mouth when she wishes to drink, and also raise her left leg from the bed. She sits up during the day, and regularly asks for the bedpan when she requires it. Speech more distinct.—Pills to be continued.



" 20th.—Continues to improve. To persevere with the pills. »

" 28th.—From the date of the last report up to the present period, her amendment has been rapid, for she now not only supports herself in the upright posture with the aid of crutches, but even walks with them from one bed to the other. Her strength, articulation, and general health, are much improved; appetite keen." (P. 7.)

This woman left the hospital at her own request, greatly relieved, and in about two months after her discharge she had recovered the perfect use of the paralytic members, and could attend to the affairs of her family as well as at any former period of her life.

Twenty-three cases are related in which the strychnia was employed in paralysis, and Dr. Bardsley concludes with the following observations:

" The above recital of cases is, I conceive, amply sufficient to show that the strychnia exerts a very powerful influence upon the system, and that it is entitled to rank as a valuable remedy in the list of articles belonging to the *materia medica*. It was employed in some of the cases of paralysis with no benefit, in others with only partial advantage, but in the majority with complete success: hence it may with justice be considered an efficacious, though not a certain, remedy in this affection. Indeed, it is almost in vain to expect a cure from any of the means supplied by our art, when cerebral disorganization has occurred. ' Whenever (as my relative Dr. Bardsley, when speaking of the employment of galvanism in paralysis, has observed,) paralysis arises from tumors compressing the substance of the brain, or from a diseased alteration in its mass and structure, or from extravasation of a fluid in such a state or degree as will not admit of its absorption, it will be readily admitted that no benefit is to be expected from the employment of galvanism, or perhaps any other remedy yet discovered.\* It is in such cases of paralysis as seem to arise from diminished nervous excitement, that the strychnia is particularly indicated.† It may be stated here, as a rule of guidance, that whenever hemiplegia supervenes to an apoplectic seizure in persons of a plethoric habit, it is proper to employ bleeding, purging, and the ordinary antiphlogistic treatment, before resorting to the use of the strychnia. When the vessels of the head have been freely unloaded,

\* " Medical Reports, p. 215.

† " My learned friend, Dr. Milligan, (to whom I take this opportunity of publicly acknowledging my obligations for the encouragement he has kindly given me in my present undertaking,) has expressed to me his doubts of the correctness of this doctrine; for he states that there are several cases on record where the person has recovered the use of his limbs under such disorganization. (See, e. g. in Abercrombie's *Path. of the Brain*, p. 263, 4, an instance of a man recovering three or four times.) Chardel, Louis, and others, have collected similar examples.

and the quantity and force of the circulating fluid diminished by the above means, there can be little objection to a cautious and prudent trial of this remedy. Generally speaking, the strychnia is likely to prove more serviceable in paraplegia, unconnected with spinal disease, than in hemiplegia; though I feel confident that it will not unfrequently be found an important remedial agent even in hemiplegic paralysis. My experience with this substance has been confined entirely to adults, for I have not deemed it prudent to administer so powerful a medicine to children, nor should I advise the attempt. In the above cases, I have endeavoured, in as far as the circumstances of each would allow, to observe simplicity of prescription, being convinced that it is next to impossible to decide upon the remedial virtues of any individual substance when the practice is complex. In several instances it will be found that the strychnia alone was exhibited, (excepting, perhaps, an occasional dose of aperient medicine,) and its efficacy was most decided. The first effects of the alkali, in every case, were convulsive twitchings of the paralytic members, and no benefit was derived until this condition of the parts had been produced, and continued for some time. In more than one of the instances of paralysis treated by Dr. Manson with iodine, the exhibition of that remedy seems to have been attended with a similar result. Thus, in the case of Elizabeth Spooner, we have the following report of the 23d February: 'I find that, on the 16th instant, she was very much troubled with twitchings and involuntary shaking of the left hand, previous to its being in a great measure restored. She can now open and shut the hand freely, and raise it as high as the crown of the head.' In the case, too, of Charles Battersby, the report of the 2d November states that, 'he has more twitching and pain in the paralytic parts since the 31st ultimo, than hitherto; has more feeling in them; and has been able, for the first time, to raise the left thigh to a right angle with the body.\*' In Dr. Alderson's experiments, too, with the *rhus toxicodendron* in paralysis, twitchings and tingling sensations in the paralytic members appear to have been the first steps towards recovery. Strychnia possesses an advantage over some other internal remedies; for it does not impair the energy of the stomach, but is rather serviceable in promoting appetite and digestion. This was very evident in several of the cases I have detailed. When it is decided upon to administer the strychnia, it is proper to commence with a proportion not greater than the eighth of a grain twice in the day. This quantity may be gradually increased to the sixth, fourth, or even half a grain, at the same intervals. The first effects of the remedy must be carefully noticed, and, should symptoms of an unpleasant nature occur, it must be immediately suspended. After a short time, its use may be resumed, and continued in slowly augmented doses, so long as the judgment of the practitioner may

\* Manson on Iodine, p. 125, 136.

approve. By attention to these points, although no benefit may accrue from the strychnia, we may be sure that no injury will attend its exhibition. I have generally administered it as a pill, with a little conserve of roses, and in this form it has been most agreeable to the generality of patients." (P. 38.)

In the second case, the dose of the alkali was increased to half a grain three times every day, with strict orders that its effects might be watched. After the fourth dose, the patient was suddenly seized with vertigo, vomiting, sinking of the pulse, uneasiness about the præcordia, difficult respiration, rigid contraction of the paralysed muscles, and copious perspiration, particularly over the head and face. These symptoms continued for some time, but yielded to the liberal administration of active stimulants, as brandy and volatile salt. The remedy was then discontinued for one day.

*Strychnia in cases of Chronic Diarrhœa.* Numerous instances of chronic diarrhœa occur among the out-patients of the Manchester Infirmary, some of which resist almost every variety of treatment adopted for their cure. In such cases Dr. Bardsley tried the strychnia, and "it proved a *safe* and *effectual* remedy." Six cases are detailed of chronic diarrhœa cured by strychnia.

"I do not consider the strychnia a suitable remedy in those instances of diarrhœa which depend upon an evident inflammatory condition of the mucous membrane of the intestines, but I more particularly recommend it in cases of a chronic kind, occurring in persons somewhat advanced in life, and of feeble constitution.

"It may be proper to state, that it is not my wish to propose strychnia as a remedy in this form of diarrhœa, to the exclusion of those sedative, diaphoretic, tonic, and astringent medicines, whose utility has been confirmed by long experience; but merely as deserving of attention when they have been unsuccessfully tried.

"The strychnia also exerts a beneficial action upon the stomach, by restoring its tone and powers of digestion.\* My intelligent friend, the late Dr. Dewar, after noticing the employment of opium, caféchu, kino, alum, ipecacuanha, sulphate of zinc, chalk, and hæmatoxylon, in diarrhœa, remarks that 'no one of those astringents has been found remarkably preferable to the rest: they are all of them often effectual, and all of them are liable to fail.† It is in such obstinate cases as these that the aid of strychnia may be advantageously solicited.'" (P. 49.)

\* "It is probable that this is the manner in which it proves useful in chronic diarrhœa, for its effects are too slow to be supposed to operate in the way of other remedies in that disease.

† Observations on Diarrhœa and Dysentery, p. 60 and 61.

Without entering upon an inquiry into the *causes* and *consequences* of Amenorrhœa, the author next proceeds to illustrate the successful administration of strychnia in his hands in some instances of *suppressed* menstruation. Four cases are described at length, and a tabular account of eight others is given. The result was very satisfactory, and amply sufficient to show the remedial virtue of strychnia in some instances of amenorrhœa.

"This is in a great measure owing to the power which the alkali possesses of stimulating the vessels of the uterus, and of improving the tone and vigour of the system. I have remarked a confirmation of this fact in two or three instances of females, with whom the menses have returned during the use of the strychnia, even after they had disappeared for more than a year and a half. I should advise the conjoint exhibition of mild laxatives with the alkali in this affection, when the bowels, as is most commonly the case, are constipated." (P. 57.)

BRUCIA, the other vegetable alkali detected in the nuxvomica by Pelletier and Caventou, has also been employed by Dr. B. in paralysis. These chemists likewise procured it from the bark of the pseudo-angustura (false angustura,) which grows in South America. Dr. Kinglake, in a paper published in the seventeenth volume of our Journal, has alluded to a poisonous species of angustura bark having been sold by the druggists at Taunton in 1807, which, in several instances, produced the most distressing effects. It is highly probable, Dr. B. thinks, that the noxious kind of bark noticed by Dr. Kinglake was obtained from the pseudo-angustura, and introduced into the market instead of the Bonplandia trifoliata. It appears, from the experiments of Andral, that one quarter of a grain of pure strychnia equals in energy six grains of brucia. Ten cases have been selected by the author from some others, as affording the best evidence of the remedial value of brucia in paralysis. He thus sums up his opinion respecting this remedy:

"The results of my trials with brucia lead me to recommend it as a valuable medicine in that affection. The action of this alkali upon the system is, as before observed, analogous to that of strychnia, but less powerful; hence it is a preferable remedy in paralytic attacks, accompanied with much cerebral disturbance. When the brucia is employed, it is prudent to commence with a proportion not greater than a grain, taken twice daily, which may be cautiously advanced to the exhibition of two grains, three or four times in the day. In the case of Andrews, which I have detailed, it appears that he was incapable of taking a two-grain pill five times daily, without experiencing symptoms of an unpleasant nature. I have noticed the same result, too, in some other in-

stances. With respect to the length of time necessary to give the brucia a fair trial in paralytic affections, I should say, from my experience with this remedy, that, unless a marked advantage accrue from its use in the course of five or six weeks, it may be very properly laid aside." (P. 75.)

**ACETATE OF MORPHIA** *in some instances of painful Affection of the Stomach.* Morphia alone has no action upon the system, on account of its insolubility. It has, therefore, been combined with acids, to form soluble salts. Hence we have the acetate, the sulphate, and hydrochlorate of morphia. Magendie has employed these salts as remedies in disease, and states that he derived from them all the advantages of opium, without any of its inconveniences.\* In a severe case of spasmodic affection of the stomach and bowels, occasioned by an incautious use of iodine, Dr. Gairdner states, "that the young lady's life was saved by a quarter of a grain of acetate of morphia given every half-hour. Every other form of opium was tried without effect: they were not even retained an instant on the stomach. The acetate of morphia alone could be taken, and it effectually restrained the disease, which must otherwise have very soon terminated the life of the patient."† In other cases, however, this medicine did not answer his expectations. The acetate of morphia has been successfully used as an external remedy in tetanus, whooping cough, &c.‡

Dr. Bardsley relates several cases in which this remedy was administered in painful affections of the stomach, and in scirrhus and induration of the uterus. The following instance of its good effects in painful menstruation is interesting:

"A female, thirty years of age, was subject to the most excruciating agony at each return of the menstrual discharge. Her suffering was so great, that she generally remained insensible for some hours. Her general health seemed to be good, and her bowels were regular. She had been under medical care both in Liverpool and Chester, but had not derived any relief from the remedies which had been employed. At the time of her applying to me, she expected the catamenia in about ten days. I directed her to take a quarter of a grain of the acetate of morphia on the first accession of pain, and to continue this proportion every half-hour, whilst it was violent. She called upon me in the course of

\* Nouveau Journ. de Med. 1818, and Formulaire pour la Preparation et l'Emploi de plusieurs nouveaux Medicamens.

† Essay on the Effects of Iodine, p. 24.

‡ Archives Generales, Octobre 1829.

a fortnight, and stated that the second dose afforded her very great relief, without suppressing the menstrual discharge, which was natural both in quantity and appearance. She now takes the morphia regularly at every monthly period, and with like advantage." (P. 99.)

Six cases of neuralgia are adduced to show the utility of the acetate of morphia. Upon the general effects of this remedy, Dr. Bardsley remarks,

"It must be allowed that morphia has not always answered the intentions with which it has been employed, but the proportion of favorable cases has been considerable, compared with those in which it has failed. I have never witnessed any pernicious consequences from a prudent use of the morphia. I am led to recommend the acetate of morphia in preference to opium, from a conviction that its efficacy may be equally relied upon, whilst its administration will be unattended by the distressing headach, excessive constipation, and other unpleasant symptoms, which that drug in large doses mostly induces. It appears to be the chief advantage of morphia, that it may be employed in those cases in which it is desirable to obtain a narcotic effect, and at the same time of the first importance to avoid constipation. It is proper to unload the bowels before commencing with the acetate, so as to give the remedy a fair chance. It is prudent to commence with not more than a quarter of a grain, which may be gradually increased to half a grain, a grain, or two grains, according to the urgency of the symptoms and the effect produced. These doses are applicable to adults. I have mostly prescribed it in the form of pill, which seems to answer very well." (P. 107.)

We prefer administering this potent remedy in a liquid form.\* A minute dose may thus be more accurately given, and, as far as our own observation extends, the solution is more to be depended upon in its effects. Our experience of the superior advantages of the acetate of morphia over other opiates, coincides with that of Dr. Bardsley.

In dropsy and chronic rheumatism, Dr. B. has used the VERATRIA and COLCHICUM AUTUMNALE with much advantage. The alkaline substance named veratria was first obtained from the *Veratrum sabadilla* by those indefatigable chemists, Pelletier and Caventou. They afterwards detected it in the *Veratrum album* and *Colchicum autumnale*. In twenty-four cases of chronic rheumatism treated with veratria, ten were relieved, seven cured, and seven were not relieved. In the same number of cases of the same disease treated with colchicum, eleven were relieved, seven cured, and six remained unrelieved.

\* Mr. Garden, of Oxford street, keeps a very convenient solution of the acetate of morphia. Six drops contain one grain of the substance.—ED.

*Remarks.* In the preceding cases, the veratria and colchicum autumnale were exhibited with very similar results. The action of the two substances upon the system was also analogous, for both produced frequent watery evacuations from the bowels. I have given the veratria and colchicum rather extensively at our hospital, both in acute and chronic rheumatism, but it must be allowed that they have often failed in affording any permanent benefit. The late Mr. Haden seems to have used the colchicum as a substitute for bleeding, in inflammatory affections, with almost uniform success.\* I have given this remedy in the manner pointed out by that author, but with very different results. In more than one instance of acute rheumatism, I have had to regret the neglect of the lancet. Such practice is pregnant with danger. 'It is seldom,' the reviewer of Mr. Haden's work justly observes, 'that the very severe form of fever which accompanies acute rheumatism, can be subdued by any remedy short of copious bloodletting: indeed, we should not wish to see a smart attack allowed to proceed, when we are possessed of means so efficient to arrest its progress.'†

"The utility of colchicum in gout is confirmed by general experience. In most of the cases of that disease in which I have seen this remedy employed, little or no advantage was procured until the occurrence of purging. My esteemed colleague Mr. Simmons, who has been a martyr to the gout for several years, informs me that he has obtained from the wine of the seeds of colchicum a relief in the paroxysms of that harassing malady, which he had in vain sought for in any other remedy. With that gentleman, the benefit from that medicine seems to depend upon its purgative operation. In some cases, however, it must be allowed that the colchicum removes the paroxysm of gout without any sensible operation of any kind. In proof of this fact, Mr. Want has adduced the case of the late distinguished Sir Joseph Banks.‡ I am also acquainted with a highly respected clergyman, in this neighbourhood, upon whom the colchicum produces no sensible effect.

"In the exhibition both of veratria and colchicum in moderate doses, I have always observed the pulse in a short time to become slower and depressed; and, if the proportion has been much or rapidly increased, distressing nausea or vomiting, and purging, have been excited. It is necessary carefully to watch the effects of these remedies, since, in an over dose, they are apt to occasion an alarming and sometimes fatal train of symptoms. I have generally commenced with the fourth of a grain of veratria, gradually increasing the dose to half a grain thrice daily, or a grain twice in the day; and with fifteen or twenty minims of the wine of the

\* See Practical Observations on the Colchicum Autumnale, &c.

† Edinburgh Medical and Surgical Journal, vol. xvii. p. 452.

‡ Vide London Medical and Physical Journal, vol. xxxii. p. 202.

seeds of colchicum, slowly increased to twenty-five or thirty, at the same intervals. The stomach will be found but rarely to retain more than the last-named quantities of these medicines; and patients hesitate to continue their use for any length of time, when frequent nausea and vomiting are induced." (P. 117.)

We have next a few brief observations on the virtues of IODINE in bronchocele, scrofula, &c. Dr. Bardsley thinks that occasional advantage may be derived from this remedy in some instances of dropsical effusion, where there is reason to suspect obstruction to the free return of the blood. It is more particularly in ascites depending upon some enlargement of the liver, or the presence of steatomatous tumors in the abdomen, that iodine is likely to afford some chance of relief. In the whole of his trials with iodine, the author has employed internally a solution of hydriodate of potass, in the proportion of half a drachm to an ounce of distilled water; and, as an external application, two scruples of the salt to an ounce of axunge. Dose of the former, ten drops twice and thrice a day, gradually increased to twenty at the same intervals; and of the latter, a drachm has been directed to be rubbed in over the affected part night and morning. Much caution is requisite in the use of this powerful medicine.\*

Dr. Bardsley's experience of CINCHONIA and the SULPHATE of QUINIA, confirms the opinions commonly entertained by the profession.

GENTIANA he has found useful in dyspepsia with irritability of stomach. The form of pill is preferred to the tincture.

In 1817, Pelletier and Magendie published the results of their analysis of the roots of the several species of ipecacuanha, from which it appears that each variety owes its emetic property to a peculiar principle named EMETINA. They inform us that they derived from it all the ordinary effects of ipecacuanha; without its disagreeable odour or taste, and recommend it in chronic pulmonary catarrh and protracted diarrhœa. Dr. Bardsley says,

"In the dose of five grains, dissolved in two or three ounces of rose water, it has proved an active emetic. In the proportion of half a grain every five hours, it has acted as a mild diaphoretic; and, in the dose of a fourth of a grain every three hours, as an expectorant. It has produced these effects with great certainty. In some instances of dysentery, chronic diarrhœa, and chronic

\* Even the application of the iodine ointment may produce injurious effects. A case in point is related in our November Number, p. 471.—Ed.



pulmonary catarrh, I have derived from the emetina, in combination with a small proportion of opium, much benefit.\* I have generally used it in the form of a pill, with a small quantity of aromatic confection. My trials with emetina do not lead me to recommend it as a substitute for the ordinary powder of ipecacuanha, except as a remedy for children, and in certain cases of idiosyncrasy, in which the effluvium of that drug is found to occasion highly pernicious effects. Several examples of this kind are upon record."† (P. 149.)

In the next section, a comparative view of the remedies in Chorea is given. Dr. B. has found that this disease is both more *certainly* and more *speedily* removed by purgatives and antispasmodics, than by either of them exhibited *singly*.

Some cases of Diabetes are reported, and the efficacy of the conjoint employment of *animal diet*, *opium*, and the *warm bath*, appears to be established by them.

"As to the perfect cure of diabetes, it is necessary to speak with much caution, for, like some other formidable diseases, it is mostly capable of being relieved only, and not effectually removed. 'Within these last six or seven years,' says Dr. Prout, 'nearly twenty cases of diabetes have fallen, more or less, under my observation; and among these I have never, but in one instance, and in that for a very short time only, seen the urine of a diabetic patient rendered quite natural.'" (P. 191.)

The volume concludes with a report on the utility of Sulphureous Fumigations in some diseases of the skin, chronic rheumatism, diabetes, &c., with some general observations on the treatment of certain cutaneous affections.

Dr. Bardsley's work will be consulted with much advantage by every practical physician. His reports bear internal evidence of being most faithfully recorded, and they must be esteemed a valuable addition to our information respecting the remedial powers of the very important medicines to which he has directed our attention.

It would have extended the present article to too great a length had we extracted more of the cases; but we shall occasionally select the most important of them, and give them under the head of Hospital Reports.

\* It may be proper to observe, that in these cases the impure or coloured emetina was employed.

† Vide Medical and Physical Journal, vol. xxiii.

*Notions of the Nature of Fever and of Nervous Action.*

By WILLIAM FORRESTER BOW, M.D. Senior Physician to the Alnwick Dispensary, and formerly Assistant Surgeon of his Majesty's 27th and 77th Regiments.—8vo. pp.100. Longman, London, 1829.

OUR notions respecting the nature of fever are still beset with too many perplexities to justify us in passing over with neglect the contribution of any respectable writer upon so important a subject. A part of the contents of the present volume has already appeared in the pages of our Journal, but since the author favored us with his original papers upon the subject, he has found it requisite to modify some opinions he formerly entertained.

Dr. Bow first communicated his opinions to a friend, and he has not deemed it necessary to alter the style: his essay is therefore divided into five letters, the substance of which we shall lay before our readers.

"Those," says Dr. B. "who have lost hope of ever becoming intimate with the now mysterious essence of fever, content themselves with the thought that a rational and successful plan of treatment may be formed, independent of the knowledge of its proximate cause. In this opinion, however, I cannot coincide; for, although we be successful in our practice, and therefore call our plan rational, we but meet a symptom, as it appears, with the remedies with which experience has armed us, which chance perhaps had first directed, and we anticipate another, which experience teaches us to look for: but is it not humiliating to acknowledge we know not what gives birth to the one, nor how the action we induce operates in preventing the other?"

One physiological fact, now acknowledged by all, will, in the opinion of the author, go far to unravel the mystery, and assist us in forming a theory: viz. that the function of secretion is at least under the influence of the nervous system. This is undeniable; but, to him, the facts and arguments of those who refer secretion altogether to nervous power, seem convincing. Some of the objections in opposition to this theory are briefly adverted to.

"There is nothing, it is said, in the ramifications of the vessels composing a gland which can in any way account for the changes in the blood out of which the secretions arise, and therefore it was naturally enough supposed that secretion is effected through the instrumentality of the nerves. In support of this view, Sir Everard

Home observés, 'that in fishes which are capable of secreting the electrical fluid, the nerves connected with the electrical organs exceed those that go to all the other parts of the fish, in the proportion of twenty to one.' 'And, in confirmation of this view of the subject, it may be remarked, that there are no parts of the body more manifestly affected, and few so much so, as the secretory organs, by mental emotion.'"<sup>\*</sup>

In the opinion of Dr. Good, these facts seem to prove that the secretory organs are chiefly influenced by the sensorial system; yet he remarks, that Haller long ago observed that the larger branches of the nerves seldom enter them, and seem purposely to avoid them; the secernent glands have little sensibility, and the secretions of plants, which have no nervous system, are as abundant and diversified, and as wonderful in every respect, as those of animals. To this statement Dr. Bow replies, that

"The motor nerves, which can have no necessary connexion with the secernent glands, do avoid them, and perhaps are purposely and wisely made to do so: and, if the glands possess but little sensibility, although largely supplied with twigs of small nerves, it is evident that all these twigs are not sentient nerves, and that they must proceed from some other source than do the motor and sentient nerves.

"These small twigs of nerves are derived from the great sympathetic, branches of which have been traced to every gland and secreting surface; a fact which alone goes far to prove that the sympathetic nerve is instrumental to the production of the secretions." (P. 4.)

"Secretion is a function which cannot, even in part, be destroyed without endangering life; yet it is denied that that process is performed through nervous agency, although we trace nerves proceeding to the organs of secretion, knowing at the same time that they are nerves neither of sensation nor of voluntary motion." (P. 5.)

Dr. Bostock's principal objection to the nervous hypothesis of secretion, and which he brings forward as a direct argument against it, is, that secretion appeared to be produced in fœtuses which had no nervous system. Dr. Bow has had no opportunity of examining the cases cited; "but, admitting that in all of them the brain, cerebellum, and spinal marrow were wanting, it does not follow there was no nervous system; for, in similar cases, the sympathetic system of nerves has been found perfect." In the case related by Dr. Clarke†, the mola, or imperfect fœtus, is

<sup>\*</sup> Good's Study of Medicine.

† Phil. Trans. vol. 83, p. 154.

stated to have had neither heart nor lungs; neither brain, spinal marrow, nor nerves.

We cannot conceive it possible that the sympathetic system of nerves can be perfect without spinal nerves, from whence that system naturally derives so many fibrils. With respect to secretion, we believe that it can only be considered as *under the influence* of the nervous system. There are many facts on record which prove that secretion may take place independently of any nervous agency. Upon this subject better evidence will not be required than the experiments instituted by Mr. Mayo. "No special organization appears necessary for nutritive secretion, or for the separation from the blood of the elements by which the body grows." "When the fifth pair of nerves had been divided upon the petrous portion of the temporal line in a rabbit, upon breaking off the crown of an incisor tooth, I found the part reproduced as rapidly as in an animal in which the nerves were entire."\* Again: "Functional secretion is remarkably under the influence of the nerves."—"Yet I found, upon cutting the nerves of the kidney in a dog, that, in half an hour afterwards, a quantity of urine had accumulated in the pelvis of the kidney, and in the ureter, which had been tied."†

Mr. Burns, of Glasgow, maintained the doctrine that, when vital action is increased in one part, it is diminished elsewhere; "but it seems," observes Dr. Bow, "to have been so much disregarded as to be now of little or no use in physiology or pathology; yet it strikes me that, with the assistance of this law, may be explained many phenomena which have been *elucidated* by referring them to the enigmatical laws of sympathy." Upon this principle the cold creeping sensations on the surface of the body, so frequently felt after a hearty meal, are said not to arise from any particular sympathy between the stomach and the skin, "but because the former, having occasion for an additional supply of nervous influence, above what the spleen can furnish, receives it at the expense of all other parts."

With the exception of the hypothesis which gives to the spleen the function of occasionally imparting nervous influence to the stomach, the doctrine contained in the above sentence may be safely admitted.

Continuing the same train of argument, the author states

\* Outlines of Human Physiology, by HERBERT MAYO, F.R.S. &c. p. 117, second edition.

† Ibid. p. 121.

"If, to the healthy subject, we administer a brisk cathartic, we thereby cause a determination of nervous influence greater than natural to the gut; consequently, during the operation of the medicine, there will be felt a greater or less degree of muscular inability and of coldness to the surface; feelings plainly arising from deficiency of nervous influence, owing to the demand for it elsewhere. But if we administer a moderate dose of opium, we diminish the nervous action of the stomach, and then every other part of the body receives a greater than usual force of nervous influence: hence the hilarity of mind and increased warmth of the surface which it produces." (P. 22.)

If the cause of the preternatural determination to any point be sufficiently powerful, the excitement will be such as to constitute inflammation, and general contractility, and secretion will then be so much impaired as to give rise to sympathetic fever.

Dr. Bow is of opinion that "all the primary symptoms of fever lead the unprejudiced observer to pronounce them to be the effects of diminished energy of the nervous system." The remote causes are said to be certain sedative powers, which impair the energy of the brain, and the first symptoms are just what might *a priori* be expected: listlessness, dejection of spirits, and muscular debility, and an imperfect state of the products of secretion.

"In the first stage of fever, the secretions must be regarded as deficient not only in quantity, but also in quality: and if so, they can only be looked on as foreign matter, which, after a time, must irritate the nervous extremities it comes in contact with. It is this stimulation which, in my humble opinion, determines the hot stage. \* \* \* This irritation I also believe to be the cause of the unnatural arterial action, which is one of the characteristics of the second stage." (P. 43-7.)

We observe that when the sentient nerves of a part are irritated, the smaller blood-vessels of the part lose their contractility in a degree proportionate to the excitement of these nerves, and consequently admit of distention; and also that the larger vessels leading to the part appear to be in a state of *excitement*.

"From what we do observe, then, in a part when its sentient nerves are excited, we may infer the condition of the whole arterial system, when all the sentient nerves of the body, and particularly those of the skin, are in a state of excitement. It is plain that there must be an arterial plethora, whereas in the first stage there is venous congestion. And it is equally plain that such a state cannot subsist if the irritability or contractility of the arteries in general be equal to what it is in health; that is, if by these terms be meant the power by which muscular fibre contracts." (P. 47.)

The cold affusion, Dr. Bow believes, acts in arresting the progress of fever by exerting a sedative influence over the sentient nerves: thus the nervous influence which had been elicited towards the surface is set at liberty, to be attracted by the organs which laboured from deficiency. The discrepant opinions as to the *modus operandi* of cold are considered to arise from a want of distinction between its primary action and secondary effect.

"Cold acts sedatively: by producing torpor of the nerves to which it is applied, it renders them insensible to the impressions which naturally elicit nervous influence to their extremities; this is its primary action. Cold acts excitingly: by producing torpor of the nerves to which it is applied, it for the time renders them useless as instruments of transmission of nervous influence; therefore, that force of influence which otherwise would have been transmitted towards their extremities, is directed through other nerves, increasing their power of action: this is its secondary effect, or the effect of its primary action." (P. 51.)

By supposing that the cold affusion acted on the principle of abstracting caloric, Dr. Currie, in the opinion of our author, was led to attach too much importance to febrile heat.

"When cold is applied to the living structure, the sensation produced is not the effect of the abstraction of caloric, so much as it is the effect of repression of the power generating the heat of the part; and this is proved by the fact that, although the abstraction of caloric is always attended with a sensation of cold, we experience sensations of cold independently of the abstraction of caloric, and which can only be referred to diminished nervous action in the part where the sensation is felt. Whether animal heat, therefore, be a product of nervous action, or a principle disengaged during the chemical changes effected by nervous influence, sensations of cold will follow the application of whatever has the power to impair nervous action." (P. 56.)

To show that opium has this effect, some experiments are referred to, which were made by Mr. Ward,\* nearly thirty years ago, for the purpose of ascertaining the effect upon the pulse of opium applied externally. Dr. Bow does not mean to deny that cold water does abstract caloric from the surface of the body; but he maintains that it is not owing to such abstraction, nor to the *impression* on the *sensations*, that fever is arrested by cold affusions.

The perusal of Mr. Ward's cases in the early volumes of our Journal, first led Dr. Bow to the employment of

\* London Medical and Physical Journal, vol. i. et seq.

opium externally in fevers. Although the author differs from Mr. W. as to the *modus operandi* of opium, he feels indebted to him for the faithful relation of its visible effects, which induced him to adopt a practice productive of the happiest results.

"I know not why the practice of exhibiting opium externally in fevers is not more generally adopted, unless indeed it be the idea that it only acts on the system after having gained the circulation. Those who favor the doctrine of absorption may think that the easiest mode of administering it is the best, and that the marked difference in its effects may rest more on fancy than on truth. To such I would say, give it a trial; and I am convinced that if they fail to quench a febrile thirst by every other means, they will succeed with an opiate liniment. By it they will impart softness and moisture to a tongue having more the appearance of horn than of any thing else; they will promote gastric secretion; they will calm delirium; in fact, they will benefit every organ labouring under the deprivation of nervous influence: and this, simply, by diminishing the sensibility of the nerves of the surface." (P. 69.)

The cold affusion cannot, without danger, be employed after the third or fourth day of the second stage of fever; for then the energy of the nervous system begins to decline, and therefore the patient might not recover from the shock which the sudden and extensive application of cold water imparts.

"But in opium we have a remedy not less powerful in effecting all that can be desired from cold: it acts on the same principle, and for this reason is well adapted as a substitute for it in the after periods of the disease. When its application does not decidedly check the fever, it mitigates the symptoms, and evidently shortens its course. It was once remarked to me by the mother of a patient of mine, that her son did not ask for drink during the night when the liniment was used at bedtime; since which, I have found it to be the case very generally." (P. 71.)

We are by no means inclined to admit the doctrine of Broussais relative to fever to its full extent, but at the same time we are not prepared "to think it rests on a mere illusion, rendered the more deceptive by the intellectual labours of one pre-eminently endowed."

Dr. Bow has not been present at any dissection where ulceration of the mucous and muscular coats of the intestines has been detected after death from fever; nor has he seen a more accurate description of it than that by Dr. Hewett, in our Journal for August and September 1826. The cases there given, he thinks, prove disorganization from want of action, rather than ulceration consequent to inflammation.

"If this disorganization of the mucous coat of the intestine be the result of diminished nervous action, I suspect it may be prevented by the external use of opium in the second stage of fever. I am in the daily habit of employing it in this manner, with the intention of diverting nervous influence from the surface; and as I must declare my astonishment at the rapid recovery of my patients, since my practice has been modified by the views I entertain, may I not believe that, by determining nervous influence to internal organs, I have obviated the tendency to this morbid process, which sometimes is an effect, but never the cause, of the common fever of this country." (P. 74.)

Dr. Armstrong viewed fever as an affection of excitement from the first, and he considered the nervous symptoms as secondary to vascular disorder. Dr. Bow admits

"That some of the nervous appearances of the first stage do depend on vascular disorder, cannot be contradicted; for we know that the nervous and sanguiferous systems are dependent on each other, and that whatever directly affects the one must indirectly influence the other. Dr. Armstrong ascribes the debility of the first stage to the preternatural accumulations of blood in the vessels about the head, heart, liver, and other internal parts; and doubtless such accumulations must have the effect of increasing the debility. But it is difficult to conceive how retrocession of blood from the surface, and internal accumulations, can take place unless as an effect of nervous disorder. Besides, the debility of fever frequently follows the febrile impression so instantaneously as to give no time for any such accumulations, and therefore it is more likely that the cause of the congestion of blood in the larger vessels is, at the same time, the cause of the debility; which is impaired energy of the nervous system. However much the internal accumulations of blood may increase the debility, they cannot be the cause of it; for, when reaction takes place, these accumulations are removed, and still the debility continue." (P. 80.)

In the last letter, some experiments made by the author are related, in support of his opinion of the *modus operandi* of opium, when externally applied.

Dr. Bow agrees with the generally received opinion, that the contractility of the blood-vessels of an inflamed part is lessened. We perfectly agree with him, "that those who support the contrary doctrine entertain erroneous ideas as to the nature of the action of remedies employed in the cure." The application of an opiate liniment is strongly recommended in many of those bronchial affections so frequent after measles, and for which general and local bleeding are much too indiscriminately employed.



*The First Lines of Botany.* By J. S. FORSYTH, Surgeon; author of the "New London Medical and Surgical Dictionary," &c.

SEEING this "Primer of the Linnæan System" in the hands of our young friends, we were tempted to scrape acquaintance with a work which professes to give "a simplified introduction to a knowledge of the vegetable kingdom, including the structure, functions, and phenomena, natural and chemical, of plants," in 184 duodecimo pages. This, thought we, is just the book for the hard-fagging, ill-used student, who is compelled to learn so much in so little time, after five years spent in learning nothing: and our predilection became still further strengthened, when, on opening the magic volume, which promised to reveal the mysteries of Flora, and naturalize its votaries as denizens of the vegetable reign, we found some *curiously-executed* coloured figures, (with the names providentially attached thereto,) for the fewness of which an excuse is proffered, on the score that it is better to refer "the student to objects within his reach, than to abstract his conceptions by indifferently executed engravings, known only to represent some natural object by the precaution taken to have the name of the individual attached to it;" on the same principle that the sign-painter of Brentford, to quiet the scruples of his townsmen, obligingly wrote under his work "This is the red lion," as many mistook it for a dun cow. On inspecting the plates, however, our admiration of the philosopher became blended with respect for the saint, who, even whilst expounding the oracles of nature, allowed not his zeal to infringe the injunctions of the Decalogue, by making the graven images like any thing either in heaven or on earth.

A short preface (thanks to the author!) informs us that "the baby system of education, as old as Adam, called the 'interrogative,' has nothing to recommend it, not even simplification of ideas." "To children of tender age, indeed, it may possess some advantages;" "but where no distinctions are drawn between an infantile and a mature mind, the idea is as ridiculous as absurd." "Another method," continues our author, "if any thing, more objectionable, is that which is thrust forward in the conversational or epistolary style, by people indifferently acquainted with the sciences they would thereby promulgate." For our part, in our ignorance, we thought that the epistolary and conversational styles were very different from each other, and that the latter more resembled questions and

answers, (in which this book abounds, notwithstanding the exorcism,) than letter-writing: but, whatever it may be, we are told that, "even in the best hands, there is something in this method at which the unassuming, industrious, and inquisitive mind recoils; and more particularly when forced, as it were, to draw, through such equivocal channels, upon the fictitious correspondence of some garrulous old woman or pedantic spinster, for the higher order of elementary knowledge."—Hear this, ye authors of "Conversations on Botany," "Letters on Botany," &c.! Hear this, ye shades of Wakefield, Martyn, and Rousseau!! But we are wrong in dallying with the "Preface," while her less querimonious sister "Introduction" claims our notice.

This sententious dame, apparently o'er-learned in quotations, observes of botany, that "it is a science which has been cultivated by the wisest of mankind, and particularly by the professors of the medical art." She is, however, scarcely intelligible in the truism that, "notwithstanding the importance of this science in a branch of medical knowledge, it is much to be regretted that it is *so little* attended to by gentlemen of the faculty in this country. Indeed, *so much so*, that it obliges them to depend on the pretended skill of the ignorant and illiterate for many of their efficacious officinal plants, frequently at the expense of their own character, and of all that is valuable to their patients:" and her memory seems but bad, for she twice inserts the same quotation of eight long lines in the course of a few short pages, (vide pp. xi. and xix. ;) doubtless by her *imperverted* mind "having in this occupation the violent passions lulled into a dead calm," which seems to be cherished as "an *unalloyed pleasure*."

But we now approach the shrine to which these "*vaunt couriers*" have led the way, and must assume a serious strain, difficult as it may be, among the numerous excitements to mirth with which the way seems thronged.

The object of the "First Lines of Botany" being profess-  
edly "to initiate the young botanist, and such as have no distinct botanical ideas, to the general study of this useful and pleasing science," we might reasonably expect, if not a profound treatise, at least a correct exposition of common principles; if not an original essay, at least a perspicuous compilation of known facts; and this more especially in a work that "attempts to correct the want of method, in an elementary point of view, by tracing 'the First Lines of Botany' in a simplified and systematic manner, in order to facilitate the introduction to a general knowledge of the

Pages 101 and 102: The definitions of the orders of the class Syngenesia, are both insufficient and incorrect.

P. 111: "Class x. Decandria. In this class are comprised several trees of foreign growth ; also the *fly-trap* of *Venus*, a native of America."

P. 125: "'The American plant called *dionæa muscipula*, or *Venus' fly-trap*, affords another instance of vegetable motion. This plant is placed, according to the Linnæan, or sexual system of botany, in the class Diadelphia, two brotherhoods, ten males. (See p. 114.)" How are these two statements to be reconciled? In the description of this plant, p. 125, the natural history of the campion is confused with that of the muscipula: and this the quotation from the Botanic Garden sufficiently exemplifies.

In the first chapter of Part iii., after enumerating many of the most important and curious of the vital phenomena evinced by plants, such as their waking and their sleep, their motions, their selection of food, their delicate irritability, &c., the author observes, "But facts of this kind, however they may excite our wonder, are *far from* proving that *vegetables live!*" What, in the name of botany, do they prove? not the sensation or perception of plants, we will agree with our author, but most incontestibly their *life*.

We like to be useful, as far as in our power lies, and will therefore add a glossary of some expressions in the volume, which are certainly hard to be understood; for, after reference to the page of corrigenda, and making every liberal allowance for the carelessness of the printer's devil, who seems to have been a reckless fellow, we freely confess that we often were at fault, and not seldom fairly stumbled: e. g. page 106, Class iii. Triandria. "The general character of grasses, of which there are upwards of 300 species, may be described as follows: the leaves furnish pasturage for cattle, the smaller seeds serve as food for birds, and the larger for man; some, however, are preferred to others, as *fescue* for sheep, *meadow grass* for cows, *canary* for small birds, *oats* and *beans* for horses, *rye*, *wheat*, and *barley* for man." We certainly knew that horses ate oats and beans, but never before dreamt that the bean was a species of grass, or should have guessed that the *natural history* of these, or any other plants, would have been given as their *general character*. But enough; and now the glossary.

P. 8. "The *advantages* resulting from a knowledge of botany *is* (are?) self-evident. Do., do., do., *passim*.

12. "The waving corn and golden *sheaths*, (i *heaves*?)

27. "The branches or *bows*, (boughs?)  
 32. "The stem or *stone*, (stalk?)  
 39. "The straw of *grapes*, (grasses?)  
 60, 67. "Stamina, Parenchyma, obsolete definitions.  
 103, 104, 107, 108, and 109, &c. "*calx*," (calyx?)  
 114, 124. "*Heydasarum*, (Hedysarum?)  
 144 "To inosculate, means *anatomically* the forming of the mouths of the capillary veins and arteries." When we were in the schools, it used to signify the interunion of vessels, and not the forming of mouths.  
 169. "Oxygen is derived from *οξύς*, acid, and *μινάσσω*, I generate." We used to write these words, *ἰξύς* and *γινάω*. Lavoisier, who coined the term oxygen, derived it from the passive, *γίνομαι*.

But we are weary, and we find that our glossary would almost extend to a verbal index of the work.

In the long dissertation on Dew, how comes it that the old works of Dufay and Muschenbrock are cited, to the neglect of the more recent and less exceptionable experiments of Mr. Daniell and Dr. Wells? But this antiquarian predilection pervades the volume; and the last fifty pages contain so much poetry and prose run mad, as to defy all sober criticism. We quit it in despair.

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## COLLECTANEA.

*Floriferis ut apes in saltibus omnia libant,  
 Omnia nos, itidem, depascimur aurea dicta.*

### PHYSIOLOGY.

*Division of the Pneumo-gastric Nerves.* M. FOURCADE recently exhibited to the Royal Academy of Medicine, a dog, on which he had performed a section and partial excision of the left pneumo-gastric nerve. The piece he removed was four lines in length. The animal appeared as lively as before, after the healing of the wound. Five days after this experiment on the left side, a similar operation was performed on the right side. The animal became dull, and appeared to waste away. These symptoms, however, disappeared; and, at the time of the report, it had again began to gain flesh. Still, however, it vomited and coughed, but less frequently than before. The voice was completely lost.

M. F. had performed the same experiment on several dogs, two of which survived it; one fifteen, the other thirty-four days. In the instances in which death quickly followed, the fatal result appeared to depend on paralysis of the glottis, and was delayed by making an opening in the trachea.—*Bull. des Sc. Med.*

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*Influence of the Cerebellum over the Generative Faculties.* After stating the various opinions held by physiologists respecting the function of the cerebellum, M. SERRES gives his belief of its influence over the generative faculties. The reasons for this are found in a great number of pathological facts, which

he adduces. They are cases of organic alterations of the cerebellum, and especially of its median lobe, in persons who had been subject (if males) to frequent and violent erections; and (if females) to nymphomania, or other excitement of the genital organs.

Experiments on animals are also adduced, in which a sharp instrument run into the cerebellum caused erection. Still more, if the irritation be directed to the lower or lumbar portion of the spinal marrow, there will be (as in the instance of Guinea pigs) ejaculation. The integrity of this part of the spinal marrow seems to be as necessary to the contractility of the vesiculæ seminales as it is to that of the uterus, since in paraplegic women, when pregnant, there is no expulsive force for the completion of labour; the organ is inert, and the os tincæ undilated. If a section of the spinal marrow at the lumbar region be practised on pregnant rabbits, Guinea pigs, or bitches, some time before the period of gestation is complete, labour will not take place. If the section be made during the labour, it is immediately arrested. Irritation of the spinal marrow at this same part produces abortion.—*Anatomie Comparée du Cerveau, &c.*

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*On the partial or total Congenital Absence of the Iris.* By Dr. BEHR. (*Hecker Litt. Annalen der ges. Heilkunde*, April 1829, p. 373.)

The congenital absence of the iris, without loss of the sense of sight, is one of the most uncommon and singular organic anomalies. M. RUDOLPH (Grundriss der Physiologie, t. ii. part i. p. 221,) has doubted whether it has ever been observed; but we are now in possession of many facts which leave no room for incredulity. The change from the natural state to the total absence of the iris appears to be formed by congenital irregularities in the figure of the pupil. The first degree of anomaly is constituted by the oblong and perpendicular pupil, like that of the cat. Another preternatural formation consists in the division of the iris from the inferior margin of the pupil to the union of the cornea with the sclerotic coat.

Dr. BEHR briefly reports all the known cases of total absence of the iris. KLINKOSCH (*Programma quo sect. et demonsta. indicit.* Prague, 1766; Meckel, *Pathol. Anat.* t. i. p. 395,) first observed this anomaly, but in a case where there also existed organic malformation of the eye and the whole body. The first case of complete congenital absence of the iris, without any other complication, was communicated to the Société du Cercle Médical de Paris, by Mr. A. MORISSON, of London, (*Nouveau Journ. de Med. &c.* t. vi. p. 105;) M. BARALTA has described two eyes, in each of which the iris was wanting, (*Praktische Beobacht. über die vorzüglichsten Augenkrankheiten.*) Professor DZONDI mentions a similar case, (*Rust, Mag. f. d. ges. Heilkunde*, t. vi. p. 33; and another is reported by Dr. PÆNITZ, of Dresden, (*Zeitschrift für Nat. und Heilk.* t. ii. p. 214.) Lastly, M. BEHR gives us the details of the following case, which he himself saw.

Caroline Schwabe, born in 1826, from the first day of her life, was so sensible to the impression of light, that she cried loudly whenever any luminous rays fell upon her eye. Her mother could perceive nothing peculiar in her eyes; but M. Behr, upon examining them in May 1827, discovered a total absence of the irides. The eyes of the mother and father were blue, and naturally formed. The child presented no other irregular formation, excepting that the upper eyelids were thick and swollen, and the eyebrows covered with

light weak hair. By degrees the infant became accustomed to light, but the eyes were always very mobile, and agitated in their orbits. The cornea was rather more convex than usual. In November 1827, she was attacked with measles, accompanied by excessive sensibility of the eyes. September 1828, the child could direct the eyes stedfastly to any object, and the sclerotic was now seen of a bluish tint, and the large pupil of a deep black colour. When the child was placed at the extremity of a room, and rays of light were directed through the window upon the eyes, a phosphorescent redness was perceived, which gave to the eye the aspect of a luminous ruby, or of a burning coal. The visual faculty did not appear to be affected by this anomalous structure of the eyes. The child, however, seemed to be more comfortable in the weak light of the evening: she was then more cheerful and playful than at other times. She could see also in almost total darkness. The brightest colours, as red or yellow, were the most agreeable to her. If she wished to examine any minute object, she drew it very near her, and always placed it below the visual axis. It appeared painful to her to look upwards, even in a weak light. The other senses were perfect, and her hearing was remarkably acute.

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PATHOLOGY.

*Stammering.* Stammering follows an affection of the anterior portion of the medulla oblongata below the olivary bodies. M. SERRÈS says, that he has never seen stammering in paralytic women: when present, it is always in men. When this infirmity prevails in families, it always attacks the males. The author has notes on more than five hundred families in which stammering has prevailed, and yet not a single example of a female being affected by it.\*

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*Abscess of the Liver communicating with the Duodenum; Perforation of the Stomach near the Pylorus.* By Dr. WALTON. (*North American Med. and Surg. Journal.*)

Edith Copeland, a coloured woman, aged about forty-five years, some time during the 9th month, (September,) 1827, first became sensible of pain in the right hypochondriac region, and soon afterwards she perceived a tumor forming in that situation. This enlargement gradually extended itself towards the left side, and its growth seemed constant during her life; great emaciation followed, and increased with the progress of the disease. Loss of appetite, constipation of the bowels, alternating with diarrhœa, restlessness, hectic fever, and night sweats, were the symptoms which were most frequently attendant. Towards the close of her disease she suffered very severe pain, and her emaciation became extreme.

As I did not see this patient until three months after the commencement of her disease, when it had made considerable advancement, there existed but little hope from the power of medicine. Blisters over the tumor were, however, applied; aperient pills were occasionally exhibited, and, as seemed necessary, her sinking strength was in some measure upheld by tonic medicines and a nourishing diet. At no period of my attendance would the general state of her system, which was feeble and exhausted, admit of the employment of active measures for the removal of her disease. At one time

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\* We know two instances of females stammering.—EDITOR.

I tried the effect of gentle purging, with small doses of calomel ; but so much diarrhœa, and consequent prostration, followed, that I was obliged to prescribe anodyne injections, and a nourishing regimen, in order to counteract its injurious tendency. After an aggravation of every symptom of her complaint, her death occurred about the close of the 2d month, (February,) 1828.

Dr. АШМЕАД assisted in making the post-mortem examination. The lungs were found healthy in structure, but pale in colour, which was attributable to a general deficiency of blood in the vascular system. On opening the cavity of the abdomen, a confused mass of disorganised structure appeared. The great omentum seemed, as it were, entangled with the convolutions of the intestines, and was adherent to them at almost every part of its surface. The peritoneum bore evident marks of previous inflammation, and the abdomen contained about one pint of a yellowish fluid, in which particles of a coagulated substance were floating. The liver was much increased in its transverse dimension, and covered with an adventitious membrane of coagulable lymph, the production of that portion of the peritoneum investing its surface. Excepting the lobulus quadratus, or anonymus, the structure of this viscus was pretty healthy. The lobulus quadratus projected far below the inferior edge of the liver, and appeared greatly enlarged. It was united to the duodenum, about two inches below the pylorus, and there existed in the intestine, at the place of attachment, an opening three inches in length. In this manner a complete communication was formed between the liver and the bowel, the result of inflammation, terminating in adhesion and ulceration. The parietes of the abscess were rough, dark coloured, and gangrenous, and its contents were composed of a soft substance, much resembling the medullary part of the cerebrum. Its colour was that of a light pink, and its smell extremely fetid.

The stomach, duodenum, pancreas, cœliac artery, and much of the adjoining structure, presented such a confused and disorganised mass, that no regular and methodical examination of them separately could be made. The mucous coat of the stomach, however, appeared nearly white, and a complete perforation of its coats was discovered near the pyloric orifice, in diameter about the half of an inch. When incisions were made into the liver, healthy bile appeared, excepting from the diseased lobe. The gallbladder was natural, and contained a small quantity of bright yellow bile.

The peritoneum was generally in a diseased condition, and exhibited marks of extensive inflammation ; in many places it was covered with a layer of coagulated lymph ; and enlarged blood-vessels appeared on different portions of its surface.

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*Effects of Gastritis in Infants.* Induration and softening of the coats of the stomach, the sequelæ of previous inflammation, carry off far more children than we should be led to suppose from the ordinary jog-trot of the practice of physicians, which prevails so much in the nursery. A child, after having been ill for several days, vomiting occasionally, passing green slimy stools, and suffering from fever, dies in convulsions, or perhaps even without that violent symptom, and indeed without our exactly knowing why. On opening the body, we find the stomach penetrated in one or two places, and the surrounding part of a scirrhus hardness, or beginning to be soft, or even completely so, and consisting of nothing but firm mucus.

In an infant, six months old, who had been weaned a fortnight before, and improperly fed, the right half of the stomach was entirely wanting; in several others, the third, fourth, sixth, or eighth part was deficient. Sometimes the remaining parts of the coats fell to pieces in my fingers, and sometimes I could not pull them asunder on account of their hardness and toughness.

In all the cases of this disease which have occurred to me, I have been able to detect, in the remaining parts of the coats, the traces of pre-existing inflammation, such as dilatation and redness of numerous vessels, scirrhous hardening, or a very peculiar softening, proceeding to an absolute dissolution of the parenchymatous substance. I found the contents of the stomach in the abdominal cavity; but all the circumstances showed that the penetration of the coats of the stomach, and therefore the effusion of its contents into the abdomen, had taken place but a short time before death. I have observed scirrhous of the coats of the stomach more frequently in young children than in adults; and I am not surprised at it: for what is there sharp, sour, spirituous, or spicy, which is not introduced into the thin and tender stomach of young children, for which nature has destined nothing but mild milk? If we reflect at the same time, on the pernicious effect of these things, and on the countless capillaries running through every part of the intestinal canal, we shall rather be astonished that more children are not destroyed in this manner.

In the eighth volume of the "New Collection of Select Dissertations for the Use of Practical Physicians," part iii. pages 474-522, several cases are to be found on the diseases of the stomach in infants there described.—*Jörg Kinderkrankheiten*, § 417.

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*Case of Hydrophobia from Cold.*—In Rust's Magazine, vol. xxvii. No. 1, 1828, Dr. BARTH relates the case of M. W., forty years old, subject to hemorrhoids and hypochondriasis: he was affected with a profuse sweating of the feet, and (according to his own statement,) had already often suffered from cramps of the chest. On the 8th of October, 1825, in the afternoon, he bathed his feet, for the purpose of removing a very painful corn, during which the feet became very cold. The Doctor was called to the patient at seven o'clock in the evening, and found him labouring under violent general spasms of a clonic character, which had commenced about an hour before. The skin of the whole body was icy cold to the touch; the pulse small and convulsive, but natural in respect to its frequency. The severe spasms, similar to those of opisthotonos, occurred every eight or ten minutes, and continued for about one minute.

The Doctor directed the feet to be immersed in warm water, and the patient to take some warm elder-tea; but the moment he attempted to drink of the tea, he was suddenly seized with a most violent spasm of the throat and pharynx, and the fluid was immediately thrown from the mouth; the eyes were convulsively distorted, the neck frightfully distended, and the head thrown backwards; the chest and abdomen were raised from the bed, while the hands and feet moved convulsively, and a hoarse sound, like that made by a person suffocating, was uttered by the patient. The same symptoms were excited whenever any fluid was approached to the mouth. Sinapisms were applied to the chest and calves of the legs, an anti-spasmodic injection administered, and a pediluvium, rendered more irritating by the addition of salt and ashes, was directed.



By these means the symptoms became less violent. At three o'clock in the morning, the patient could, without any difficulty, swallow fluids, a profuse sweat having broken out over the whole body, and especially upon the feet.

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*Mania produced by Indigestion.*—This interesting case, reported by M. J. DE SOUSA FERRAS, is copied from the *Journal Universale des Sciences Medicales*, for September 1828. A Portuguese woman, forty-two years old, had been invited by some females of her acquaintance to eat cakes and drink liquor. In making the cakes, they had introduced into them portions of twisted hair, as a charm. This, it appears, is a species of witchcraft much employed by the negroes of Brazil. For twenty-four hours after partaking of these cakes, the woman experienced only a loss of appetite; but subsequently there occurred nausea, an oppression at the stomach, and at length a complete derangement of the mind, with watchfulness, and absence of all desire to eat or drink. In this condition, a state of stupor was succeeded by a wild gaiety, and this by raging delirium. Under these symptoms she continued two days: M. Sousa being then called in, and informed of what had taken place, directed an emetic: this brought up from the stomach a ball of hair, of the size of a chestnut. The delirium ceased immediately, and the only symptom of disease which remained was considerable debility.

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*Colica Pictonum.*—From a long but very excellent memoir upon the Colic produced by Lead, by N. P. ANGLETIN, M.D., contained in the *Journal General de Medicine* for October 1828, we copy the following general conclusions as to its pathology, which the author conceives to be fairly deduced from the facts and arguments which he has advanced.

“The lead does not act immediately upon the coats of the intestinal canal, and the symptoms of the lead colic cannot be attributed to an inflammation of the mucous membrane of the intestines.

“To produce the phenomena which constitute the colic from lead, it is necessary that the lead should penetrate into our organs by absorption, either from the intestines, the lungs, or from the surface of the body.

“When thus introduced into the system, it acts first upon the nervous system; that is to say, upon the brain, the spinal marrow, and the triplanchnic nerve, which form an inseparable whole.

“This action of the metal upon the nervous system produces, in certain cases, symptoms of encephalitis, or of myelitis, but most commonly it occasions a spasmodic and painful contraction of the muscles of the intestines, and of many other parts of the body.

“If we were to form a scale of all the diseases of the intestinal canal, we would place at the two extremities cholera morbus and the colic from lead. In the one, the setory functions of the intestinal tube and of its appendices are exalted to the highest degree, while its peristaltic movement is augmented in a similar proportion: in the other, all the secretions are suspended, and the peristaltic motion ceases in consequence of a tetanic condition of the muscular coat.”

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## PRACTICAL MEDICINE.

*On the Employment of Digitalis in the Inflammatory Stage of Hydrocephalus.*  
—Digitalis is recommended by GÖLLIS, as well as many other physicians; though he confesses that, in hundreds of trials which he has made of this plant in inflammatory hydrocephalus, during the space of sixteen years, it has been by no means so serviceable as it is in inflammatory hydrothorax following scarlatina or hæmoptysis, when the infusion is employed as an emulsion with gum scacia. I have given the key to this inefficacy of digitalis in my work entitled "Materials for a future Materia Medica," from page 444 to page 472: the experiments detailed there show clearly that this plant acts primarily as a stimulus to the brain, the intestinal canal, the urinary and the generative organs, and only secondarily on the vascular system; and that, in consequence of its exciting the brain, it produces a state similar to drunkenness, confusion in the intellect, giddiness, oppressive headach, sometimes in the forehead and sometimes in the occiput, and increased warmth in the face. If, however, these indications of its power over the brain are really among the properties of digitalis, it is obvious that, in the first and second stages of this disease, so far from being useful, it must be prejudicial; as, from the great irritability of the brain, it acts much more strongly upon that organ than upon the kidneys of the child, which are not yet sufficiently developed, or upon the torpid intestinal canal. As long, therefore, as digitalis excites the brain, its exhibition during either the turgid or the inflammatory stage of hydrocephalus, is as improper as that of wine, musk, or similar remedies. I cannot have a better opportunity than this of pointing out the great advantages resulting from experiments tried with medicinal substances upon healthy men. A keen observer, and diligent as well as fortunate practitioner, and versed in the physiology and pathology of children to a degree that no other man can boast of, confesses that, in inflammation of the brain attended with effusion, he has not found digitalis so useful as it is asserted to be by other physicians, though he has often tried it. What the admirable Göllis found out in a period of sixteen years, by trying the effects of this plant on patients, I was taught by my experiments on healthy subjects, in a fortnight or four weeks. Göllis, however, was merely able to convince himself that it was of less use than others attributed to it. But the reason of its slender success, nay more, the reason why, in the first and second stage of this cerebral disease, it may do harm, necessarily remained unknown to him; as children are unable, in more than one respect, to perceive and manifest the stimulating power of this plant upon the brain.—*Jörg Kinderkrankheiten*, § 607.

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*On the Employment of Cotton as a Dressing for Blisters.* By A. P. MERRILL, M.D. of Natchez, Mississippi.

Blisters that are not required to be kept discharging for any length of time, are readily healed by the application of finely carded cotton, as in cases of vesication from burns. The cotton should be applied as soon as the vesicating plaster is removed, half an inch or more in thickness, and sufficiently large to ensure the complete absorption of the discharge. In two days, under ordinary circumstances, a new cuticle will be formed, and the blister cured. This dressing gives no pain, and may be adopted with particular advantage in dressing blisters upon the neck, when the patient is confined in bed, and also for persons who are not confined by indisposition; as blistered surfaces,

when dressed in this manner, give so little inconvenience as not to interfere with the motions of the body in common exercise.—*North American Med. and Surg. Journal.*

*Delirium Tremens.*—In Friedrich's Hospital, Copenhagen, when delirium tremens was treated partially by antiphlogistics, with personal restraint of the patients, in 1820, 1 out of every 4 died, and in 1821, 1 out of 4 2-7ths; but, in 1822, when a more strict antiphlogistic treatment was pursued, under the direction of Professor HERHOLDT, the patients being allowed their liberty, only 1 died out of 9 4-5ths; in 1823, 1 out of 12; and in 1824, 1 out of 9 2-3ds. In the same institution an exciting treatment, (by opium and stimulants, we presume is meant,) without disinction of the cases, gave as its result, in 1817, 1 death out of every 2 3-4ths patients; in 1818, 1 out of 2 4-9ths; and in 1819, 1 out of 2 10-11ths.—BARKHAUSEN on *Delirium Tremens.*

*Ergot of Rye.*—According to OSLEBE, an American physician, the ergot of rye produces abortion in animals, as well as in the human female.

#### SURGERY.

*Treatment of Syphilis by common Salt.*—It is said, in the Clinique, that, from time immemorial, syphilis has been cured in the East by common salt, employed locally and internally. The monks of the convent of Czenstochow, near Cracau, have derived some very brilliant cures from this mode of treatment.

#### *Treatment of Gonorrhæal Ophthalmia.* By Dr. E. EISSEN.

M. DUPUYTREN treats this species of disease by bleeding and the application of leeches to the lower eyelid. He then instils laudanum into the eye, and recommends the insufflation of calomel. Dr. EISSEN objects to this topical medication. He considers it dangerous and improper, and attributes to it the frequent ulceration of the cornea, and the coagulation of the humor which exists between the laminæ of that membrane. In his opinion, the practice employed by BEER, RUST, ASTLEY COOPER, (we may add GUTHRIE,) is much to be preferred. It consists, in the first place, in a vigorous antiphlogistic treatment. There are few diseases in which we may bleed so boldly. In robust subjects, three or four bleedings may be required in the twenty-four hours. The application of leeches to the inferior eyelid ought not to be had recourse to, on account of the irritation occasioned by the bites. Much advantage is derived from cupping upon the temple. Having thus fulfilled the leading indication, we should apply blisters to the arm or to the neck, upon the principle of revulsion. But calomel is the chief remedy. It is not given as an anti-syphilitic, nor merely as a purgative, but is intended to produce an excitement of the digestive canal, which may diminish the determination of blood to the eye. For this purpose, and to prevent any congestive tendency towards the head, we must guard against affecting the gums by the calomel. Five or six grains of calomel, with an equal quantity of jalap or magnesia, to determine its action to the intestines, may be given every hour. Half this dose will be sufficient for weak subjects, and in such cases it will be better to

unite the calomel with magnesia. But the important part of the treatment is to continue it until an artificial affection is produced, which will ensure a complete revulsion of the morbid action from the eye. This artificial affection will be announced by rumbling of the intestines, green and fetid stools, a leaden-coloured countenance, contracted nostrils, coldness of the extremities, and metallic taste in the month.

The only local remedy that should be employed, is warm marshmallow water. The insufflation of calomel, instillation of laudanum, or solution of corrosive sublimate, or mercurial ointment, which are employed by *Реска*, are always dangerous means, even when the inflammation is diminished. Astringent collyria can only be used with propriety when the inflammation has disappeared, and when it is necessary to restore the contractile powers of the enfeebled capillaries of the conjunctive membrane.—*La Clinique*.

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*Successful Ligature of the Carotid Artery, for Sloughing in the Throat, with Hemorrhage.\** By MR. LUKE. (*Medical Gazette*.)

T. B., ætatis forty-five, a tall, rather muscular man, of sanguineous temperament, captain of a coasting vessel, trading between Cornwall and London, while in the former place, was stung by a wasp on the wrist, which became much inflamed, attended by a pustular eruption around the part. Livid red blotches, about three days after the sting, appeared on the trunk and extremities, with fever, neither of which created any alarm. With these upon him he went on board his vessel, bound to London. On his passage he had the misfortune to take cold, and was affected with sore throat, requiring confinement to his cabin. In a week he arrived in London, much worse, at which time he was visited by Mr. GAYTON. The soreness, however, increased, and the difficulty of swallowing was very considerable. He experienced much pain, particularly in the left side, where he was convinced a "gathering" had formed. His opinion was confirmed on Sunday, September 27th, by the bursting of an abscess, with partial relief. Together with the matter, he passed about six ounces of blood by the mouth. He was still sensible of another gathering lower in the throat than the first, on the same side; and, exhausted as he was by disease, he began to entertain apprehensions for his safety. On September 29th, he was brought on shore, and took up his residence with a friend, in the neighbourhood of my house. On the eve of this day, the second abscess burst, and shreds of slough came away with the matter: by this he was much relieved, and slept the greater part of the night.

Sept. 30th, three weeks from the commencement of his illness, I was called to him about four o'clock in the morning, in consequence of his having lost a large quantity of blood. He had been awake by something flowing from his throat, which proved to be blood. When I arrived, he had already lost about half a washhand-basinful of blood; and shortly after he vomited more than two pints of coagula, making altogether between four and five pints lost in about half an hour. I found him in the greatest state of exhaustion; his pulse was scarcely perceptible, and very rapid. There was extreme paleness of the lips; the eye sunk in the orbit; a clammy sweat upon the

\* In our last Number Mr. MAYO published an interesting case of this kind, in which the same operation was successfully performed. We saw this patient a few days ago: he was quite recovered.—EDITOR.

skin; inclination to vomit; and he could not speak louder than in whispers. On attempting to examine the throat, I could see nothing behind the soft palate, to which were adhering shreds of coagula. In a short time he began to revive, and his pulse became more perceptible.—Ordered one grain of the acetate of lead, with a quarter of a grain of opium, every two hours; goulard lotion, with equal proportion of spirit, to be applied to the throat; the head to be elevated on a pillow; to be kept perfectly quiet, and abstain from swallowing as much as possible.

Twelve o'clock.—The faintness has gone off, and he is much revived. He complains of thirst, and of pain of his left shoulder and elbow, which, however, may be pressed without inconvenience. The wrist is still inflamed.—Ordered to continue as before directed, and to use a lemon to quench his thirst.

October 1st.—Has slept soundly after taking fifteen drops of *Liq. Opii Sedativus*, and is improving in appearance. The blotches are still visible in various parts of the body, resembling the remains of bruises, which he states they were like when they first appeared. They are not painful, nor raised above the surface. The disease has been clearly the *purpura hemorrhagica* of BATEMAN.—Ordered to continue as before, and to take a small quantity of beef-tea.

3d.—About four P.M. I was again called: bleeding had returned, but had ceased before my arrival. In about a quarter of an hour he had lost between three and four pints of blood: his pulse, however, was not much reduced in strength, nor increased in frequency, nor did he appear much exhausted. He spoke in whispers, and complained of the throat, and pointed to the left side of the os hyoides as the seat of pain. From this part, during the bleeding, he felt a jet issue into the throat.—Ordered to continue the acetate of lead and opium, and, in addition, half a grain of powder of *digitalis* every two hours.

4th.—At four A.M. bleeding again returned. From the account I received, I expected to see my patient dying or dead. I found him in the greatest possible state of exhaustion; faint to nausea; the pulse with difficulty to be felt, and very rapid; the breathing laborious, and extreme paleness of the countenance. He was sensible, but apparently indifferent to surrounding objects. He had lost at this bleeding more than three pints of blood. It seemed almost certain that he must die. After a short time, however, he began to revive; the pulse became more distinct, and breathing more free; but the powers of life were so far reduced, that another bleeding would inevitably prove fatal. I therefore determined to tie the carotid artery on the left side, that being the trunk which the circumstances of the case indicated to be the source of the bleeding vessel. To obtain the advantage of daylight, the captain was seated on a chair near a window. Before, however, he was arranged for the operation, his face became convulsed; the pupils of his eyes dilated; his head fell upon his shoulders, and his pulse and respiration ceased. In this state he was hurried back to bed, with the impression upon my mind that he was past hope. A few minutes showed that he had only fainted, and he soon revived. His head was then laid over a pillow at the foot of the bed, and, as the room was dark, I was obliged to proceed by candlelight. An incision, of about three inches through the skin, exposed the platysma myoides, which was divided along the inner border of the sterno-mastoides muscle. This being drawn to one side, exposed the omo-hyoides crossing the sheath

of the vessels which was then cut through. The carotid could be very indistinctly felt pulsating in its sheath, into which last I made a small opening. A director was then introduced to detach the artery from the accompanying nerve and vein. This being done, a needle, armed with a double ligature, was carried around it from the outside, without bringing into view either the nerve or the vein. The ligatures were separated, and tied about half an inch apart, and the wound closed with plaster.\* On being questioned, he said he did not experience any unusual sensation when the ligature was drawn tight. His pulse was very weak, and beating 120 in a minute. The pupil of the left eye more dilated than the right. He was kept in the same position as during the operation, except that his head was not so much extended.—Ordered beef-tea and light drinks.

Eleven A.M.—Is a little revived, and has been tranquil since the morning. Pulse 110, and weak; breathing natural; skin warm; the tongue dry, and there is thirst, but he is free from pain.—Ordered to continue the beef-tea, and use lemon to quench his thirst.

Eight P.M.—Has slept since the last visit, and is going on well.

5th.—Has slept well through the night without medicine; pulse 100, and stronger; the colour has partially returned to his lips; his spirits are better, and confidence of recovery increased. He complains of a slight numbness extending over the forehead. The bowels have not been relieved.

6th.—The numbness has left the forehead, the pain of the throat has subsided, and he swallows without much difficulty. He is improved in strength.

7th.—The wound was dressed, and found to adhere for half its extent. He has been feverish and restless during the night, and his sleep disturbed by dreams. In the evening, he spat up about an ounce and a half of saliva, tinged with blood, by which he was considerably alarmed. His bowels have not been opened since the operation.—Ordered a draught of infusion of Senna and Sulphate of Magnesia immediately. ℞. Infusion of Roses, and grt. xv. of Træ. Digitalis every six hours; and Syrup of Poppies, to appease the uneasiness of his throat.

8th.—Has passed a restless night, but is now better. The bowels have been opened five times. The feverishness and uneasiness of his throat have subsided. For the first time I could make an examination. There was a slight fulness only to be seen on the left side. His appetite is good and spirits revived, and he swallows with ease.

11th.—There has been again fever and irritation of the throat; he has also spat up about two ounces of blood, and is much alarmed. Bowels confined.—Ordered to repeat the opening draught, as occasion may require.

16th.—He left off the digitalis on the 13th, in consequence of a headach, which was attributed to its use. He has been daily improving, and the wound looks healthy. There is no pulsation to be felt in the carotid above the ligature, nor in the temporal artery. The opposite carotid beats with unusual force. The pupil of the left eye is more dilated than the right, but he can see equally well with both.

20th.—He requires to take opening medicine frequently, otherwise his bowels become confined, and fever supervenes. There is a good deal of irritation of the gums, arising from collection of tartar around the teeth, and a gum-boil has formed since yesterday over the incisor teeth, filled with con-

\* Why were two ligatures applied?—EDITOR.

gealed blood.—Ordered an opening draught, and to wash the mouth with muriatic acid gargle, in the proportion of ten drops to the pint of water. The ligatures were twisted, to expedite their separation.

26th.—The ligatures were taken away, being the twenty-second day from their application. The gums are better, and he is going on well.

November 7th.—Has been down stairs daily since the 26th, and now is enabled to call on his friends and to transact business. He has no unusual sensation, but is weak, and becomes fatigued soon. Pulsation has returned in the arteries above the os hyoides, but not in the trunk between this bone and the place where the ligatures were applied. The wound is not quite healed: he, however, proposed to leave town shortly for the country.

He left town a few days after the last report.

### NATURAL HISTORY.

*On the Vision of the Mole.* By M. GEOFFROY SAINT HILAIRE.

Does the mole see? Aristotle and all the Greek philosophers believed it to be blind. Galen, on the contrary, maintained that it sees, affirming that it is possessed of all the means of vision. The question has again been taken up in our days: naturalists have discovered the eye of the animal. It is very small, being at the most not larger than a grain of millet seed; its colour is deep black; it is hard to the touch, and is with difficulty depressed by squeezing it between the fingers. Besides the eyelid which covers it, it is defended by long hairs, which, crossing each other, form a thick and close fillet. Such an eye ought to be destined for seeing, but anatomists have found no optic nerve in it. What could be the purpose of an eye destitute of the nerve which, in the other animals, transmits the visual sensations to the brain? This consideration naturally leads back to the opinion of Aristotle and the Greeks, and would induce us to think that the mole, although it has an eye, does not see with it, and that, consequently, this eye is nothing but a rudimentary point without use.

Direct experiments, however, made at the request of M. Geoffroy St. Hilaire, demonstrate, in the most incontestable manner, that the mole makes use of his eyes, since it turns aside to avoid the obstacles that are placed in its way. But, if the mole sees, how happens it to have no optic nerve? M. Serres thought that the optic nerve was supplied by an upper twig of the fifth pair, that which may be considered as analogous to the ophthalmic branch of Willis.

According to M. Geoffroy St. Hilaire, the transference of function to a nerve which is not naturally destined to perform it, does not exist. The mole sees by means of a particular nerve; but this nerve not being able, on account of the too great extension of the olfactory apparatus, to follow the course along which it directs itself, in the other animals, to the tubercula quadrigemina, follows another direction, and anastomoses with the nerve of the seventh pair.

The observation of certain monstrosities furnishes examples of anomalies of precisely the same nature.

It is a fact well known in science, that each organ of sense is necessarily provided with two kinds of nervous systems, a special and principal nerve, which imparts life to the apparatus, and maintains it, and an accessory nerve. These nerves are, for the sense of smell, the olfactory and nasal nerves; for that of sight, the optic and ophthalmic; and for that of hearing, the acoustic nerve and the branch of the cochlea.

The mole also possesses its two ocular nerves, the principal and accessory, that is to say, the optic and ophthalmic. For the two nervous actions attributed to these two nerves, being contrary in direction, and yet simultaneous, could not be accomplished by a single branch. Now, in the mole, independently of the nerve which occupies the bottom of the eye, and which this position ought to induce us to consider as the optic nerve, there is another which occupies at its commencement a point of the circumference of the eyeball. This latter seems to come from a mucous or glandular tissue; or, perhaps, it even issues from a true lachrymal gland. The two nerves of the eye of the mole are enclosed in a common sheath, in the same neurilema.

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MISCELLANEOUS.

WESTMINSTER MEDICAL SOCIETY, Dec. 5th and 12th. DR. GRANVILLE *on Protracted Gestation*.—The interest excited by the announcement of this most important subject attracted a full attendance of members and visitors, and produced a very interesting discussion on two evenings.

Dr. GRANVILLE entered into a very elaborate exposition of the question, and had the satisfaction of finding himself without an opponent. He ably and ingeniously contended that protracted gestation did occasionally occur, and he completely triumphed over the legal quibbles by which an attempt was made to weaken a part of the evidence he adduced upon the Gardner Peerage cause. Much amusement was created in the Society by the sarcastic dexterity with which Dr. G. commented upon the conduct of the gentlemen of the "flowing robes and triple row of curls" upon that important occasion.

The principal speakers were Dr. F. RAMSBOTHAM, Dr. A. T. THOMSON, Dr. MERRIMAN, Dr. LEY, Dr. LOCOCK, Mr. CHINNOCK, and Mr. NORTH. The cases cited by Dr. Granville, together with others related by different members of the Society, in our opinion, completely proved the occasional protraction of human gestation. One very important argument upon this subject, which Dr. Granville did not fail to apply, is that, if no deviation ever happens from the ordinary period of utero-gestation, it is the only law or process of nature to which there are not occasional exceptions. The evidence of those who decide this question in the negative, will bear but little examination. In the words of Dr. Merriman, they maintain that protracted gestation "does not occur, because it cannot." Speculation is here opposed to facts; for on the affirmative side cases have been recorded, and two or three very decisive ones were mentioned in the course of the discussion, in which the character of the female was free from the slightest suspicion, and in which, indeed, she had no cause for deception. We think there is no reason to doubt the opinion of Dr. Granville, and the Society in general, that pregnancy may be, and is, sometimes extended beyond that period which ordinarily constitutes the *ultimum tempus pariendi*.

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*Post-mortem Examination of the double Female Infant, Ritta Christina.*

An examination of the body of the female infant Ritta Christina, whose death we noticed in our last Number, has lately been made by a commission of medical men in Paris. M. GEOFFROY ST. HILAIRE gives the following account: We first observed that Ritta was much more emaciated than Chris-



tina, at least in the upper region, the part of the body distinctly belonging to her; for in the upper half there was a much more evident difference in their being than in the lower, where their union became more intimate. On the posterior part of the raphé two anuses, one on the right, the other on the left, were observed externally. From the nurse's statement, the feces were invariably evacuated by the right anus, and, as we afterwards discovered, this alone was connected with the rectum; the other communicating with a canal opening into the vagina. The children had but one pelvis, with single apertures: they were formed, however, as if of two, united vertically. If one leg were touched, the sensations produced could not be felt but by the cerebral centre of one and the same head, as testified by MM. LARREY and RIBES. One pericardium contained two hearts. They were brought in apposition for the extent of six or eight lines at their points, so that that of Ritta was constrained in its movements, and pressed by that of Christina. Thus there was a heart on both sides. The difficulty of Ritta's circulation was produced by the position of the hearts, and thus is explained the commencement of morbus cernuus, which had been observed in her. But one liver was found, and that evidently composed of two blended together, there being two lobes of Spigelius. Two stomachs, and two small intestines, united inferiorly, were observed. There were two uteri; one, as usual, situated behind the bladder, the other quite behind, being separated by the rectum from the former. There was one pectoral cavity, and one mediastinum completely dividing it, and separated from the abdomen by a simple diaphragm. The junction of two primitive diaphragms, however, was found at the middle. One side of the diaphragm, therefore, might have belonged to each; and the immediate cause of death, paralysis of this muscle, is by M. SERRÈS attributed to this fact. The paralysis had at first been confined to the side of Ritta, but that of Christina ultimately became affected. With respect to the two hearts, nothing decided had been ascertained during life; one only was indicated by the stethoscope. We are promised further particulars on this subject.—*Lancette Française*.

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## INTELLIGENCE.

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### MONTHLY REPORT OF DISEASES.

DURING the course of the last month, the general character of disease has been such as might be expected from the severity of the weather. Rheumatism, catarrhs, and inflammation of the lungs, have been frequent. In two cases of asthma, we have certainly derived advantage from the exhibition of the tincture of the *Lobelia inflata*, which has recently been so much extolled by the American physicians. Two cases of that affection in young children, which has, we think, very improperly been called "cerebral croup," have also fallen under our notice. In both there were the croupy breathing, the thumbs firmly turned in upon the palms of the hand, and the inverted state of the feet. Purgatives and strict attention to diet quickly relieved these symptoms.

## OBITUARY.

We have to announce, with deep regret, the death of Dr. ARMSTRONG, which took place at his house in Russell square, on Saturday, December 12th. Dr. Armstrong was well known to the profession for his indefatigable zeal. His peculiar opinions on the nature and treatment of fever, were perhaps, from his ardent enthusiasm, carried a little too far; but the doctrines he maintained upon this subject stamped him as a man of great ingenuity and original thought. As a lecturer on the practice of medicine, he was eminently successful; and, as a private practitioner, he enjoyed a large share of public confidence. By his professional brethren he was highly esteemed, and his loss will be deeply lamented.

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## MONTHLY LIST OF MEDICAL BOOKS.

*[Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]*

**Sketches of Intellectual and Moral Relations.** By DANIEL PRING, M.D. Member of the Royal College of Surgeons, London.—8vo. pp. 466. Longman and Co. London, 1829.

**Elements of Physics; or, Natural Philosophy, General and Medical, explained independently of Technical Mathematics.** In two vols. Vol. II. Part I. comprehending the Subjects of Heat and Light. By NEIL ARNOTT, M.D. of the Royal College of Physicians.—8vo. pp. 320. Longman and Co. and Underwood, London, 1829.

**A Manual for Students who are preparing for Examination at Apothecaries' Hall.** By JOHN STEGGALL, M.D. M.R.C.S. &c. FOURTH EDITION, with considerable Additions and Improvements.—Royal 18mo. pp. 333, with Plates. Highley, London, 1830.

The student, who has already passed through his various classes, will derive much advantage from looking over this volume. By studying the numerous questions and answers it contains upon Chemistry, Materia Medica, Anatomy, Physiology, Nosology, Practice of Medicine, Midwifery, &c. he will impress upon his mind the information he has previously received. It will not be a less useful assistant to him who has yet to enter upon his studies: it will prepare him to follow, and properly to appreciate, the doctrines of his teachers, with much more facility and pleasure to himself than if he entered upon his task without having first gained the elementary principles of his profession. The last regulations issued from Apothecaries' Hall are affixed to the work.

**A Practical Treatise on the anti-Asthmatic Properties of the Bladder-podded Lobelia (Lobelia Inflata, Linn.); with Directions for the Exhibition of the Preparations of it, which have succeeded in the Practice of the most eminent Physicians.** With Instructions as to Diet, Exercise, &c., and Remarks on the supposed Varieties of the Disease. To which is added, an Account of the Chirargyta Herb, lately introduced as a Remedy for Nervous and Gouty Indigestion, Morbid Sensibility of the Stomach, and Obstructions of the Liver, &c. By RICHARD REECK, M.D. Fellow of the Royal College of Surgeons, &c.—Ridgway, London.

**A Practical Treatise on Diseases of the Genitals of the Male; with a Preliminary Essay on the History, Nature, and general Treatment of Lues Veneræ.** By JOHN MADDOX TITLEY, M.D.—8vo. pp. 403. Herbert, London, 1829.

**Hospital Facts and Observations, illustrative of the Efficacy of the new Remedies, Strychnia, Brucia, Acetate of Morphia, Veratria, Iodine, &c. in several Morbid Conditions of the System. With a comparative View of the Treatment of Chorea, and some Cases of Diabetes. A Report on the Efficacy of Sulphureous Fumigations in Diseases of the Skin, Chronic Rheumatism, &c.** By JAMES LOMAX BARDSLEY, M.D. Physician to the Manchester Infirmary.—8vo. pp. 223. Burgess and Hill, 1829.

**The Muscles of the Human Body, describing their Origin, Insertion, and Use. Arranged in four Tables. For the use of Students.**—Burgess and Hill, London, 1829.

For the moderate price of one shilling, the student has here presented to him a clear and correct account of all the muscles of the human body. If their circulation is in proportion to their utility, these tables will have an extensive sale.

**Researches principally relative to the Morbid and Curative Effects of Loss of Blood.** By MARSHALL HALL, M.D. F.R.S.E.—8vo. pp. 303. Seeley and Sons, London, 1830.

### METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

November	Moon	Rain gauge.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 a.m.	mid.	m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	2 p.m.	10 p.m.
20			30	34	27	30.22	30.20	65	67	N	N	Fog	Th. Fog	Th. og
21			31	36	32	.15	.05	67	65	N	W	—	—	Fin e
22			35	43	39	29.84	29.58	65	65	SW	SW	Show'ry	Rain	Show'ry
23			40	42	37	.47	.57	65	63	NW	NNW	Fine	Cloudy	Show'ry
24			39	39	32	.53	.44	63	66	ENE	NE	Cloudy	Cloudy	Rain
25			32	37	32	.42	.58	68	69	NE	E	Foggy	Show'ry	F&Mist
26			37	38	36	.73	.76	69	71	E	E	Cloudy	Cloudy	Cloudy
27			37	41	37	.63	.63	74	75	E	NE	Foggy	Sleet	Sleet
28			40	42	38	.63	.68	75	75	NE	N	Foggy	Cloudy	Fine
29			39	41	40	.68	.70	72	69	NW	NW	—	—	—
30			40	41	40	.71	.71	67	68	SE	SE	—	Cloudy	Fine
Dec. 1			40	43	39	.71	.68	68	68	SE	SE	—	Fine	—
2			29	45	40	.64	.61	68	69	E	ESE	Foggy	Foggy	Show'ry
3			42	46	39	.68	.71	70	70	ESE	ESE	—	—	Foggy
4			41	44	42	.67	.82	71	71	SSE	SSE	—	—	—
5			47	50	37	30.14	30.27	71	70	SSE	s	—	Fine	—
6			39	41	31	.37	.29	70	70	SE	SE	—	—	Fine
7			35	36	32	.24	.15	70	68	SE	SSE	—	—	Foggy
8			35	35	32	.18	.24	65	67	s	W	Fine	Fine	Fine
9			33	38	32	.24	.14	67	66	N	NE	Foggy	Fine	Fine
10			34	39	32	.04	.00	66	66	NE	ENE	—	Foggy	Fine
11			33	38	35	.04	.04	68	68	SSE	s	—	Fine	Fine
12			37	43	37	.05	.07	69	69	SSW	SW	Fine	Fine	Fine
13			41	45	36	.08	.12	69	68	SW	SW	Foggy	Fine	Fine
14			37	39	32	.16	.22	68	70	SSW	s	Th. Fog	Th. Fog	Foggy
15			35	40	35	.22	.19	70	71	SW	WSW	Fog	Foggy	Fine
16			38	41	34	.15	.04	71	72	NNE	NE	Foggy	Fine	Fine
17			37	39	32	29.85	29.71	72	69	NE	NE	—	Fine	Foggy
18			35	37	33	.50	.63	69	69	SE	ENE	—	Fine	Fine
19			35	35	32	.73	.70	68	68	NNE	NE	Fine	Fine	Fine

The gauge having frozen, the quantity of Rain cannot be given.

*Communications have been received from Dr. GRIFFIN, Mr. D. GRIFFIN, Dr. ASHLEY GAITSKELL, Dr. HUTCHINSON, Mr. WALLER, and Mr. COX.*

*Ston College*

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## THE LONDON Medical and Physical Journal.

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For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long but an invaluable series.—*Rush*.

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ORIGINAL PAPERS, AND CASES,  
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER  
AUTHENTIC SOURCES.

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### FUNCTIONAL DISORDERS OF THE SPINAL CORD.

*Observations on Functional Disorders of the Spinal Cord, and their Connexion with Hysteria, Nervous, and other Diseases; illustrated by Cases, selected chiefly from the Reports of the Pallas-Kenry and Currah Dispensaries.*  
By WM. GRIFFIN, M.D. and D. GRIFFIN, M.R.C.S.  
Limerick.

(Continued from page 25.)

SINCE it seems difficult to account for interruption of function, except by organic lesion or alteration, and the chief way in which such alteration makes itself known to us is by this interruption, it is not singular we should be very much puzzled when called upon to believe the ordinary actions of every organ of the body may be affected, either by preternatural increase or diminution, or total suspension, without the occurrence of any physical change. Hence it is that some pathologists deny altogether its possibility, looking upon the words *functional disease* as a sort of solecism, and asserting, with great truth, that, in a system so little admitting of minute examination as the nervous, most important changes may take place, which yet elude all observation. But, in speaking of functional disease, we believe, it is generally meant such affections as are not *traceable to altered structure*, and which admit of a perfect, and sometimes instantaneous, return to health. Whatever may be our reasoning, we have every day the indisputable fact before us, that people become suddenly attacked with

symptoms resembling those resulting from organic changes, and yet as suddenly recover their original health, in a way which such changes would not seem readily to allow. These complaints may, perhaps, be said generally to depend on altered relations in the system, rather than on altered structure; and it is on this supposition that they have been so often attributed to vague and inscrutable sympathies. But, however mysterious they may be, our knowledge of their seat and character seems tolerably clear, derived as it is from the disturbance of function and other symptoms observed on particular changes of structure, and our experience of their usual course and termination. It is on this account chiefly, to give assurance of the connexion of those disorders dependent on irritation with particular parts of the system, as the spinal cord, we shall give, whenever we can, cases of organic disease of the same parts, presenting strong analogies of character.

We now proceed to point out more particularly the dependence of the many affections which we have mentioned, on irritation of a greater or less extent of the spinal medulla.

Although, for the sake of illustration, it is perhaps best to give the cases in the order which the affected portion would suggest, it is not intended to take up time with the simpler and less important ones. These, it is true, as being affections solely of the cervical, or the dorsal, or the lumbar portions, more strictly define the symptoms proper to each: but, independently of the necessity there will be to say something about them in a subsequent part of this paper, there are some reasons why they will not answer our purpose here. It seems necessary that a certain extent of the spinal cord should be in a state of irritation or disorder to produce any effect on the circulating system, or on the viscera. The simpler cases, therefore, depending on irritation of a point or limited portion of the medulla, are in general mere affections of one or two pair of the spinal nerves, sensitive or motory, mere neuralgia, and cannot furnish us with illustrations of the more important and complex irritative diseases, which it is proposed to reduce to some arrangement. It is only necessary to keep in view, that, in the cases cited as affections of the cervical medulla, the upper dorsal are sometimes implicated, and in those of the dorsal, sometimes the lower cervical, sometimes the upper lumbar. They must each, therefore, have some symptoms detailed not entirely proper to them, but which the intelligent reader will at once refer to their real origin.

*Irritation of the Cervical Portion of the Spinal Cord, inducing Affections of the Head, Neck, Chest, Stomach, and superior Extremities.*

Acute and chronic headach, browach, aching of the cheeks and face, may be mentioned first as among the most common symptoms of cervical irritation, both in the simple and complex cases. They are continually met with, as well as the subsequent ones of affections of the senses, in cases of organic disease of the cord, though usually in connexion with others of a more formidable nature. The following are taken almost indifferently from the case-book.

VIII. A young gentleman, aged twenty, complained of intense pain in the crown of the head and forehead, with excessive soreness of the scalp and feeling of general illness: is subject to attacks of the kind, and usually relieved by purgatives and lying down. There was great tenderness of the five upper cervical vertebræ, pressure on any of them occasioning the pain in the vertex and brow. Purgatives and rest were again successful in relieving him; the application of leeches, and a blister to the nape of the neck, to remove the tenderness, were then recommended. As long as this symptom remains, however effectual the relief, the complaint can only be considered as suspended.

IX. James O'Brien, aged fourteen years, applied at the dispensary, complaining of pain and soreness in the crown and forehead, especially on stooping, sometimes very distressing, and attended with deafness. There was tenderness of all the cervical vertebra; pressure on the first or second excited pain in the vertex and brow. Was ill one year. Recovered by the use of purgatives, and of blisters to the nape of the neck.

X. Ann Lynch, aged nineteen years, troubled with distressing headach, especially of the forehead, with sickness of stomach and thirst. Pulse ninety-five, tongue white, bowels confined; catamenia regular. Had been ill six days. Pressure on the first or second cervical, or behind the mastoid process, excited the pain severely at the brow. Was relieved by an emetic, followed by purgatives and a blister to the neck.

XI. Anne Day, aged thirty years, complained of constant headach, with soreness of the whole scalp; frequent faceach, affecting all the branches of the fifth pair. Has tenderness of the neck, and continued pain down the left arm and between the shoulders, at the left side of the spine.

Is unable to work; appetite impaired; general health bad. On examination, there was great tenderness of the cervical and upper dorsal vertebræ. This is a recent case, and yet under treatment.

XII. Mrs. M. aged forty years, a nurse, complained of headach, soreness of stomach, and soreness and pain of chest, with stiffness at the right side of the neck. This stiffness increased suddenly at times, seizing the muscles like cramp, and followed by hoarseness and dimness of sight. Was debilitated and in bad health. There was great tenderness on pressure at the middle cervical and seventh dorsal vertebræ. This patient was treated like the foregoing, but was slower in recovering.

The soreness of stomach was, in all probability, referrible to the tenderness at the seventh dorsal, and not, as it very frequently is, to irritation at the trunk of the par vagum. It is then usually accompanied by sickness and loss of appetite, and sometimes spasmodic attacks like cramp.

XIII. Mary O'Brien, aged forty years, ill three years, complains of pain in the head, particularly severe over the brows and at the temples, and occasionally confining her to bed for days. She is very weak and nervous; has no appetite, and is worse after eating. Is occasionally attacked with pain of stomach. On examination, there was found extreme tenderness of all the cervical vertebræ, pressure on any of them, or behind the mastoid process, exciting the pain severely at the brow and temples. There was also soreness of the seventh or eighth dorsal vertebra, pressure on which occasioned pain at the ensiform cartilage. In this case there was so much general debility, and so many points of the spine were affected for a length of time, that a rapid recovery was not to be anticipated. She did well after some weeks, by the strictest attention to the digestive organs, a course of tonics, and occasional small blisters to the spine.

XIV. Catherine Deely, aged thirty years, six weeks ill, complained of constant distressing headach, with pain in the stomach and nausea after eating. Bowels are in a natural state, but sometimes griped; catamenia regular. Pressure on the dentata excited the pain in the forehead, and on the ninth dorsal, at the stomach. Recovered under the use of mild aperients, with acids, and of counter-irritation.

These cases, which it would be tedious to multiply, serve to show the frequent dependence of painful affections of the head on spinal irritation. Perhaps it may be thought much

that the mere fact of the distant pain being excited or aggravated by pressure on the cervical vertebræ, should establish such an inference; but, though this is in itself a very important circumstance, there are many others, hereafter to be considered, connected with the pathology of cerebral and spinal disease, which we think may more fully confirm it.

Among these, we cannot avoid remarking the pain and sickness of stomach so frequently mentioned as attendant on the headach. Indeed, the stomach is so seldom free, that the headach is usually looked upon as merely symptomatic of its disordered state; and so, no doubt, it often is; but much experience in these cases must convince us that the sickness and pain, and loss of appetite, are still oftener themselves symptoms, the result of irritation at the origin of the par vagum. It might, perhaps, be doubted whether disturbance of the stomach from any cause not acting immediately on itself, could ever exist without this irritation. We see that in inflammations, however extensive, of the arachnoid membrane, so long as it is confined to the convex surface of the brain, no effect is produced on it; but when the arachnoid of the base is attacked, vomiting is invariably one of the symptoms. Even the sympathies must have conductors, and, as it seems to be the general belief, these are to be found in the nervous system: we can only hesitate between the eighth pair and the sympathetic. There seem to be many reasons for believing that the latter is much less frequently the medium of communication between the head and stomach than the former.

Various affections of the senses, loss of sight, hemeralopia, loss of hearing, noises in the ears, vertigo, spectra or visions, delirium and insensibility, are severally effects of irritation at the cervical portion of the cord, and are sometimes accompanied by headach of a very intense nature. But they are still more frequently met with where the spinal affection is general. Blindness, vertigo, deafness, ringing in the ears, are affections that scarce need particular illustration, appearing as occasional symptoms in almost every severe case which we may have to relate. Hemeralopia is more unusual.

XV. John Hayes, aged fifteen years, complains that, as soon as night falls, he invariably becomes blind: he cannot see the furniture or people about the room, when they are perfectly visible to every one else. The candle or fire-light appears a broad red haze, just distinguishable from darkness, but making nothing perceptible. He can perceive



any dark object between him and the light, and no more. Has been affected in this way now about a fortnight, and had a similar complaint a year ago, which continued a good while. There is great tenderness evinced on pressing the second cervical vertebra. He perfectly recovered in less than forty-eight hours, by a small bleeding, an active calomel purgative, and a blister to the nape of the neck, and has since continued well.

The following is also a case in which vision was affected in an extraordinary manner.

XVI. A young gentleman, aged seventeen, is frequently attacked with violent headach and sickness of stomach, which symptoms were always ushered in by indistinctness of vision. His first warning of the fit is a sudden appearance of something misty and tremulous before his eyes; soon afterwards he can perceive only the vertical half of any object he looks at, and eventually the outlines fade away altogether into thick darkness. This almost total blindness continues generally for a very short period; the thick dark mist gradually clears off, and the forms of every thing around him are again distinctly observed. He is then instantly seized with intense headach, chiefly affecting the forehead, usually so dreadful in its nature, and accompanied by such distressing nausea or sickness, that he says he could scarce live if it lasted a second day. He commonly finds relief by lying down: the pain is thus more easily endured, and the paroxysm is shorter, terminating in four or five hours, when it might otherwise continue for twenty. Instead of pain, a deep lethargy sometimes supervenes on the affection of vision, during which he lies as in heavy slumber, but frightfully conscious of time passing, and of terrific sights and sounds thronging his imagination. He awakes out of this in a state of temporary delirium; does not know for some time where he is, or what has happened, and speaks incoherently. Even after the subsidence of the headach, although there is much less confusion of mind than after the lethargy, the memory is always very imperfect for some hours. He cannot recollect the words he wishes to make use of, but employs others wholly inapplicable in their stead; and of this mistake he is always conscious at the moment. To these attacks he has been subject for about two years, but in their intervals he has sometimes been affected in a very different way. He awakes suddenly out of his sleep at night in dreadful apprehension, for which he cannot account. There is a continued crowding and rushing of ideas through his mind. He feels as if

every thing he did, and all that was done about him, passed over with a frightful and hurried rapidity. This at last wears away, and is generally, even from the first, more or less under the influence of his will; an effort to check the current of his ideas, and divert it into another direction, frequently proving successful.

On examination, there was found great tenderness of the second cervical and of the seventh or eighth dorsal vertebrae. When this last was slightly pressed upon, he felt a horrible sensation shoot through his whole frame. It was quite indescribable, and had nearly made him faint. He expressed the greatest apprehension at the thought of the pressure being repeated, and had a disagreeable feeling in his back for the entire day afterwards.

As this case fell accidentally within our notice, and was not at any time in our care, little of treatment can be given. He says the symptoms have been considered as the result of bile and a dyspeptic stomach, but that they do not seem to yield much to remedies, and still continue to recur as frequently as at their commencement. This is precisely what might be expected under general treatment. When once spinal disorder is induced, and has persisted for any length of time, it becomes, like chronic inflammation in the synovial membranes, altogether independent of its original cause, whatever that may be, and requires distinct attention. Attacks of the kind are often so troublesome and intractable as to be attributed to incurable organic disease; but although they may induce such mischief, if long neglected, they are usually, like symptomatic affections of the heart, the result of disturbed function alone. There can be scarce a doubt but, in the foregoing instance, the application of leeches, or cupping at the nape of the neck, repeated small blisters, followed by a stimulating liniment, to the whole of the spine, and strict attention to the general health, would have succeeded in effecting a cure.

There is much reason to think cases of amaurosis sometimes depend on irritation of the cervical portion of the medulla. The connexion of the 5th pair of nerves with the function of vision, which M. Magendie has so clearly ascertained, might readily suggest such a dependence. Indeed, this pair of nerves is so necessary to all the organs of sense, in the performance of their functions, that it does not seem extravagant to suppose these cases of slight insensibility, occurring in hysterical patients, may be sometimes caused by a temporary suspension or disturbance of its powers alone. They can neither hear, see, taste, or smell; they

have only one faculty still connecting them with the surrounding world, general sensation; and over this the 5th pair has no influence.

The great discrepancy which prevails in the opinions of modern physiologists, both as to particular facts and the inferences to be drawn from them, is often exceedingly perplexing to the practitioner, who has seldom leisure or opportunity to repeat the experiments. Mr. C. Bell does not seem to think Magendie correct in his conclusions about the influence of the 5th pair over the nerves of the peculiar senses, and attributes, with much reason, the blindness, deafness, loss of smell and taste, which occurred in a case of extensive disease at its origin, to inflammation resulting from want of the common sensibility necessary to the protection of the different organs. It was so far an inappropriate illustration. But we cannot see how this is to explain the sudden loss of sight, or smell, or hearing, on division of the 5th, before inflammation can be said to exist, or the mischief which we may infer from the loss of common sensation could possibly occur. We can understand very well the necessary dependence of motion on sensation, but the dependence of the action of one sense on that of another is not capable of explanation, without admitting a new physiological law. Mr. Mayo's experiment of the division of the 5th pair within the cranium offers nothing conclusive on this subject, as the section of the nerve was imperfect. But it seems well worth remarking, that several eminent writers on diseases of the eye mention the frequent occurrence of amaurosis from wounds or injury of the supra or infra-orbital branches of the 5th, and this without inflammation or the slightest observable change in the structure of the organ: in fact, Mr. Guthrie, who takes more particular notice of these affections, attributes them, not to any diseased action excited in the eye, but to sympathy; which is nothing more than supposing them to depend on some *unknown influence of the 5th* over the optic. In these cases, when alteration of structure is observable, Mr. Guthrie conceives there has been always an injury of the eye itself. There may perhaps be found, in the cases which we shall give, some pathological phenomena still more confirmatory of M. Magendie's inductions; but, if we were to search for illustrations, it would be difficult to find a more favorable one than is furnished by Mr. Bell himself, in the paper containing his comments on this subject: the case of Fred. Hill. Although it has been so recently before the public, we venture to restate it.

"Frederick Hill, ætat. ten, subject from childhood to a pain in his ear, was, twelve months ago, seized with obstinate pain of the left ear, which gave him no rest night or day. The pain extended to his head and face, and appeared sometimes to be *in the bones of his forehead and sockets of his eyes*. It then affected his teeth, and he had toothach *in every tooth in his upper jaw*. After this his left eye became affected, and *he lost his sight*. From this attack he recovered, as his mother says, by large bleedings, leeches, injections, shaving the head, and blisters. He had once or twice discharges of matter, preceded by pain, fever, and delirium, and followed at last by epileptic fits, on the recovery from which he was speechless. He was so irritable, that the slightest unexpected noise, even the striking of a clock, would bring on one of these fits; and having thrown himself down in a paroxysm of passion, about a week after his admission to the hospital, he became instantly deaf. His arm was afterwards observed to become useless: it hung by his side; he could move the fingers, but not the arm, from the middle of which to a little below the elbow was acutely painful when touched. The actions of respiration were perfect. When he smiled, there was no inequality in the action of the muscles of the face; he was said to make noise enough in laughing, and hollowed out when cupped, but there was no articulate sound. He understood every thing communicated by writing. When asked to speak, and the throat was grasped during the effort, there was no motion perceptible in the muscles of the tongue, yet he could masticate and swallow with ease; he could nearly touch the point of his nose with his tongue, or turn it down to the chin or sidewise. There seemed, nevertheless, an utter inability to the pronounciation of words; the consent of action between the chest, larynx, and mouth, seemed to be lost. The boy gradually recovered the use of his arm, and having left the hospital, suddenly recovered his hearing and power of speech at the same moment, some time after; a gush of matter taking place into the mouth at the time it occurred."

The explanation of this interesting case does not seem difficult. An abscess from disease of the temporal bone produced irritation at the base of the brain and medulla oblongata, "disturbing," as Mr. Bell justly expresses it, "the operations of the nerves, without altogether destroying their influence." The 5th pair became affected, and *there were pains in the forehead, in the teeth of the upper jaw, and blindness*. The seventh afterwards partook of the disturb-

ance, or was affected through the 5th. There were finally irritability of mind, *delirium and epileptic fits, followed by speechlessness and paralysis of the left arm*; all of which are common results, as we shall afterwards show, of irritation at the upper part of the spinal column.

Mr. Bell does not say whether the blindness was sudden, but we may infer that it was. Had it been the result of inflammation, consequent to lost sensibility of the 5th, there must have been disorganization of the eye, as in Magendie's case, which it is evident there was not, as he perfectly recovered his sight; and had it been the result of disease at the origin of the optic nerve, the right eye should have suffered, and not the left, as the influence of these nerves is across, while that of the 5th is direct. The sudden recovery of hearing and of voice seems to make it yet more probable that all these symptoms might be fairly referred to irritation propagated from the internal ear to the base of the brain; in short, to functional derangement. And it is here necessary to call the attention of the reader to the remarkable similitude which this case presents to a train of symptoms occurring in the first one given in these papers. The lady, after suffering a length of time with an indisputable affection of the spinal column, in which *headach, aching of the forehead and facial branches of the 5th*, were prominent symptoms, was attacked suddenly with violent oppression, *blindness of the left eye, deafness of the left ear*, (omitted in the statement,) *paralysis of the left arm, and speechlessness*. None of these paralytic affections were perfect, except the last. The eye was slightly sensible to light, the ear to very loud sounds, and she could, like the boy Hill, move the fingers, but not the arm, but the voice was utterly gone. This seemed to depend on paralysis of the recurrent, and not of the lingual. The mind, the expiratory powers, and motions of the tongue and lips were perfect. She could express herself on paper, or make herself understood by the usual articulate motions, which it would appear the boy was unable to do.

The delirium mentioned as a symptom in the above case is a very common occurrence in spinal affections, whether chronic or acute. When unattended by feverishness, however wild or extravagant it may be, it is generally subdued without difficulty: sometimes, especially when it depends on uterine irritation, by one or two active purgatives. It is not rare to see a young girl, who is putting a whole house in an uproar, perfectly quieted by a dash of cold water and a dose of castor oil. We have no notes of cases

precisely of this kind, but may offer the following, which seems to be of severer character than common, probably from long neglect.

XVII. Mary Enright, aged twenty-three years, is often seized with sudden blindness and giddiness, which in a short time pass off, but leave her with confused and disordered intellect. She describes herself as not knowing what she is doing, and saying all sorts of foolish things. This state lasts eight or ten days, after which she perfectly recovers her reason. The general health appears pretty good, and the catamenia regular. There is extreme tenderness of the second cervical, and of the seventh or eighth dorsal vertebræ: the pain in the last spot originated about nine months since, in consequence of a fall when carrying a can of water. This case, which bears a remarkable resemblance to the extraordinary one related above, was benefited by bleeding and purgatives; but is recent at the dispensary, and yet under treatment.

Many cases of ocular spectra, or illusions, seem also to belong to disorders of the cervical medulla; at least, if the spinal tenderness be admitted as any evidence of it. An instance occurred to us some years since, where a young girl was haunted by a spectral figure, which she described as standing by her bedside. She was frequently seized with fits of screaming, as she fancied it approached her, and kept her relatives in the greatest state of alarm and astonishment. A few active purgatives gave immediate and effectual relief. We shall only cite one case of a more recent date, presenting some singular features.

XVIII. Michael Nash, aged thirty-six, of a good constitution, but very intemperate habits, was for some days complaining of occasional pains in the stomach and arch of the colon, with costiveness, loss of appetite, and general nervous excitement. He had constant slight pain in the brow, with disturbance of vision, and extreme sensibility to noise, and all other impressions on the senses. His eyes were suffused; his tongue white; his pulse full, at about ninety; and he had flitting pain in his chest, with occasional oppressions and great anxiety. His chief distress, however, arose from visions, with which he was very continually troubled. Figures of persons, almost all of whom were wholly unknown to him, were frequently before him, sometimes so plain and distinct, that, although his reason assured him they were mere illusions, he could scarcely avoid believing they had an absolute existence. They were not

always the same, nor always present, but went and came, renewing his anxiety and irritation of mind as often as they appeared. On examining the spine, tenderness was found at the three upper cervical vertebræ, pressure on any of them exciting the pain, with great suddenness, at the brow. The eighth, ninth, and tenth dorsal were excessively tender, the slightest pressure on any of them occasioning an exceedingly distressing sensation to shoot suddenly upward along the spine to the neck and brow, and downwards to the lower trunk and extremities. It was not pain, but a horrid feeling pervading the whole frame; and it was only by the greatest entreaty that he could be induced to permit a repetition of the examination. The sensibility had now so much increased, that a mere touch was sufficient to renew these distressing sensations. A pint of blood was taken from the arm. During the operation the visions returned: he said he saw three women standing behind the gentleman who was bleeding him. Being asked were they as large as life, he replied that "they were rather low," and pointed to the place where they stood. It was inquired "Had he ever seen them before?" "No." "Were they speaking to each other?" "No." "What were they doing?" "They were usually minding their business, but sometimes stopped to watch him, and kept their eyes fixed on his for some moments." The sense of feeling was quite as much disturbed and illusive as that of sight; for in a few moments after he called out that he felt "one of them" thumping up against that part of the bed on which he lay; and presently again looked abruptly behind him, saying "that somebody had hit him two or three times on the back." All this was very different from the usual raving in mania, as he scarce felt the impression before he was himself aware of its illusion. In fact, the chief distress seemed to be from the imposing nature of the perception, when he knew it was impossible it could have had an object. "Get me rid of these sights and sounds," was his entreaty, "and get me some sleep, or I shall lose my senses."

Active purgatives were made use of after the bleeding, and a blister was applied over the ninth dorsal, which was of great service. He soon recovered under the continued use of gentle aperients, combined with bitters.

He had a recurrence of the attack some months after, in consequence of hard drinking; but though he complained more of the head, especially at the back of it, there was no material fulness or frequency of the pulse, or febrile

irritation. He was relieved by purgatives and blistering, and was afterwards treated with camphor and other nervines.

Illusive affections of hearing, smell, and taste, are not perhaps so common as those of sight: they are yet found in frequent connexion with that acute sensitiveness of the whole nervous system which usually prevails in severe instances of spinal irritation. A lady, whose case we shall have hereafter to relate, was sometimes startled by distinct loud screams from one of her children, and could only be convinced of her illusion by sending to the hall, or the distant room from whence the sound seemed to come. This extreme sensitiveness appeared to be always connected with increased tenderness of the upper cervical portion of the cord.

We now come to speak of cases of much greater frequency and importance, those on which stupor, and sometimes coma, are induced. These have been usually attributed to affections of the brain, of which, indeed, they are frequently the result, but we shall have it in our power to show not by any means most frequently. We have before said it is impossible, in complaints rarely terminating fatally, to bring post-mortem or absolute evidence of their exact seat. We can only offer general reasoning. The extraordinary concurrence and resemblance of symptoms in those cases, we consider as functional disorders, with those recorded as having existed in the organic structure of the same parts. The physiological probability, the success of particular treatment, and the inference from strictly analogous cases: considerations of this kind, however individually unimportant, are strong and conclusive when corroborating one another; but we shall insist on them at more advantage towards the conclusion of these papers.

XIX. Margaret Fitzgerald, aged fourteen, a girl of sanguine habit, complained of slight headach and heaviness for some time, but did not seem otherwise unwell. Her countenance had usually an appearance of being flushed, and the eyes looked dull. One day, while reading, she fell suddenly upon the floor in a state of insensibility, but was not convulsed, and recovered very soon. She had three attacks of this kind within a short period of one another, before any medical treatment was instituted. Never had the catamenia.

On examination, great tenderness was discovered at the third cervical vertebra. Some blood was taken from the arm, and purgatives administered, which prevented the



attack for a period of three months. On its recurrence, the same remedies were resorted to; but in eight or ten weeks there was a return of the fit. A blister to the tender vertebral bone was now ordered, and it was directed that it should be repeated in a few days, if the slightest soreness remained, or if at any time a recurrence of it was detected.

Nearly a year has now elapsed, and by a strict adherence to this plan she has never since had a fit. There have more than once been strong indications of its approach, in the appearance of the countenance, and a return of the tenderness in the neck; but purgatives and blisters always prevented the attack.

XX. Mary Caugney, aged eleven years, was for some days accustomed to fall down in a fit, in which she lay for some time, with flushed face, speechless, and almost insensible, generally from one to four hours. They came on sometimes two or three times a day. The tongue was white; the pulse natural, at ninety; she occasionally felt pain in the bowels and head, sometimes a little preceding the fit. The pain in the head was instantly brought on by pressure on the cervical vertebræ, particularly the second and third. The sixth, seventh, eighth, and ninth dorsal are also tender to the touch; pressure on the third, fourth, or fifth dorsal, sent a shooting pain up the neck and over the brow, which was felt as if passing within the canal of the medulla spinalis.

In this instance purgatives were made use of for seven or eight days, with little effect. The fits became less frequent, but still continued to recur. Six ounces of blood were then taken from the arm, and a blister ordered to the nape of the neck. So much relief was derived from the bleeding, that the girl neglected to apply the blister, and continued well and free from the fits, until the beginning of June, (about six weeks afterwards,) when they again recurred with precisely similar symptoms. The abstraction of blood being now repeated, and followed by the application of a blister, the attack was arrested as before, and has not since returned.

These cases are of exceeding interest, if only as illustrations of apparently formidable diseases yielding so instantaneously to the treatment. We may venture to infer from them, as well as from numerous others, how much more frequently even affections of the senses are the result of disturbed function than of organic mischief. These fits are frequently, as in the latter case, interrupted or cured by

abstraction of blood. Whether this acts by relieving congestion in the spinal vessels, as many have supposed, or by quieting nervous irritation, we must not now stay to inquire. The attack is too frequently mistaken, especially in children, for a serous affection of the head; but is almost invariably at first symptomatic of some distant irritation, as of dentition, disordered stomach or bowels, or of a peculiar state of the uterine system; to which probably it was to be attributed in one of the foregoing instances. It is continually met with in all those spinal or hysteric cases in which the cord is affected to any extent; and though usually, and perhaps necessarily, connected with a deranged state of the cervical medulla, it seems sometimes to occur when the lower portions are more severely engaged; even so low as the middle lumbar. It is often attended by pallor and universal coldness of the surface, with depressed circulation, and is then mistaken for syncope, which in fact it closely resembles; but much more frequently it is accompanied by flushing of the cheeks and brow, with throbbing of the carotid and temporal arteries, and burning heat in the hands and forehead. We have never seen it occasion stertorous breathing, but, when it terminates fatally, it may possibly do so, running into perfect apoplexy. It may, however, end in death without exhibiting any such symptoms, as it sometimes seems to do in young children; in women with spinal affections subsequent to delivery; and we may perhaps say in those singular instances in which typhoid patients die suddenly in their convalescence.

Cases of this description occur occasionally in the slightest as well as in the most severe instances of spinal irritation, and are not commonly dangerous in either, unless altogether neglected or mistreated. We have seen a patient remain ten or twelve days in a state of insensibility, only differing from apoplexy in the quiet, almost imperceptible, breathing, and the greater mobility of the iris; and from syncope, in the distinct, full pulse, the temperature of the skin, and the natural expression of countenance. This is very like what has been called trance, but not bearing so perfect a resemblance to death as that state is sometimes said to do. It is not uncommon, however, to see a child so affected during dentition, that it is with difficulty distinguished from one that is recently dead. The subject of fits affecting infants is one of extreme interest, if only from their frequent occurrence, but still more so from the great and sudden danger with which they are often attended. This fortunately depends not so much on the violence

of the exciting cause as upon the extraordinary sensibility and irritability of fibre which exist at that tender age. About their proximate cause there has been some discussion, and very lately a paper has appeared in one of our periodicals, from an American physician, who attributes them in all instances to spasm affecting the intestines. This spasm, he conceives, may be induced by disordered stomach and bowels, the common result of the irritation and feverishness of dentition, or of flatulence or acidity arising from improper food. The fit of insensibility or convulsion is thus invariably regarded as a sympathetic effect of the spasm. No doubt, it would be supposed, could be entertained that worms, flatulence, and acidity, by irritating the intestinal tube, may, whether exciting spasm or not, induce the sympathetic action on the sensorium; but, in the cases originating in dentition, which are by much the most numerous, it will appear obvious that the fit is excited in a more direct way, the irritation at the extremity of the maxillary branch of the 5th pair inducing a peculiar affection at the base of the encephalon or medulla oblongata, which in its turn occasions either the disorder, and perhaps spasm of the stomach, or the state of insensibility or convulsion, or both, as we have seen it continually does in severe instances of spinal irritation in adults. It is necessary to dwell a little on this point, as, if our opinion is correct, it may influence materially the views of treatment. No fact seems clearer to us than that those cases in which the sensorium is affected in dentition, through the medium of the bowels, are by no means the most frequent; that the disturbance of the bowel is itself commonly an effect of spinal irritation; and that even where it is the medium by which the inflamed gums act, it is by no mysterious sympathy between them and the brain, but usually by bringing on that peculiar state of the medullary cord, of which so much has been already said. It is unsatisfactory that this state cannot be ascertained by examination of the spine, as in grown persons: children are apt to cry at very slight pressure, when perhaps there is no soreness at all; and yet it does not appear to us that an attentive observer would often be deceived in the expression of the countenance. The sharp, quick wincing of the features, when acute pain is felt, is very different from their slow gathering up in mere peevishness. The following case seems strikingly to support the foregoing opinions.

XXI. An infant of six or eight months old, apparently in good health, but suffering at times from teething, became

restless in the nurse's arms, and was seized with sudden paleness. He had slight quivering and blueness about the lips, the eyes turned upwards, and he lay back still and insensible, as in syncope or death. He was recovered by the warm bath; his gums were freely lanced, and the bowels were strictly attended to. He had, however, a recurrence of the fit every six or seven days, sometimes to a prolonged and alarming degree. The state of the spine now excited attention, and, as the child seemed to evince strong indications of pain on slight pressure at the upper cervical, a blister was applied there. The fit did not return for a fortnight, and then in a slighter degree than usual. The blister was consequently repeated, and another laid behind each ear, as soon as it healed. After this three weeks elapsed before there was a recurrence of the attack. It was at length determined to keep some part of the back of the neck constantly in a state of irritation; and, as long as this plan was adhered to, the child continued perfectly well. All apprehension on the subject ceased after some weeks, and the soreness behind the ears having been unadvisedly allowed to heal up, the little patient was once more seized with the fit, while asleep in the cradle, to a more violent degree than ever, and recurring two or three times in the course of one night: recourse was instantly had to the remedy which had already proved so successful, and, from this time until the irritation of dentition had entirely subsided, a slight discharge was constantly kept up, either behind the ears or at the back of the neck. The child never had a return of the attack afterwards.

However deeply impressed with a conviction that fallacies in medical reasoning often originate in inferences drawn from single cases, we cannot but observe, that here the treatment originated in conclusive deductions from strictly analogous affections, and that no remedy directed simply either to the bowels or the teeth, or the nervous system generally, was of any avail. It was the strong similitude observed between those attacks in infants, and the fits of insensibility and convulsions occurring in girls of hysterical habits, known to depend on spinal irritation, that first led to our attributing them to a like cause. Women, possessing greater sensibility of the nervous system than men, are much more liable to violent affections of it from very trivial causes, whether mental or corporeal, which accounts for the fact that functional disorders of the spinal cord (nervous diseases) are esteemed almost peculiar to them. Infants have, as has been already observed, the same exquisite

texture and susceptibility to slight impressions, and we should therefore naturally expect would be subject to the same complaints.

Fits of insensibility are frequently brought on by slight pressure at the affected vertebra; a convincing proof of their dependence on the state of the medulla. We shall have to state cases, when speaking of general irritation of the cord, in which patients tumbled suddenly forward, perfectly insensible, on pressing at a particular point of the spine. Fits of syncope are occasionally brought on in the same way, as might have probably occurred in Case XVI. of the young gentleman whose vision was so singularly affected, had the pressure been continued or repeated. Indeed, as we have before mentioned, it is sometimes extremely difficult to distinguish between fits of insensibility in which the heart and arterial system are only secondarily affected, and fits of syncope in which they are directly depressed. Of these last we shall next proceed to speak.

#### INJURY OF THE HEAD.

*Case of severe Injury of the Head.* By J. C. COX,  
Surgeon, F.L.S.

It is well known that in cases of injury of the head, there is no symptom of more fearful augury than bleeding from the ear; so much so, that there are few exceptions to its being the indication of a fatal termination. The following case, which was attended with very serious symptoms, is a happy exception to this generally received opinion.

A gentleman, after dining a few miles out of town, where he drank pretty freely, was, on his return home, thrown out of his stanhope, and fell on his head. He was taken up insensible, was placed in a hackney coach, and conveyed to his house in town. I was called to him at about one o'clock in the morning, and found him lying on the sofa, in a state of stupor. He was, however, easily roused, and answered questions rationally. After removing him to his chamber, I proceeded to examine into the nature of the injury he had received. I found a severe contusion on the back part of the head; the scalp exceedingly swoln, from extravasated blood, and a small superficial wound. There was considerable bleeding from the left ear, and the face was paralysed on the left side: there was, however, no loss of sensation, so that the mischief was in the portio dura. The pupils were dilated. There was no other mark of injury excepting on the head.

I dilated the wound of the scalp, thinking it probable

there might be fracture of the skull. This, however, was not discovered; but the incision removed the extreme swelling of the scalp, and gave great relief. As the pulse was eighty, full, and strong, I bled the patient to twenty ounces, and then put him to bed. I ordered some pills of calomel and jalap immediately, and a dose of salts and senna every four hours, till the bowels were freely opened.

Sept. 27th.—I found him much better this morning. He was quite tranquil and rational, felt no pain in the head; the medicine had acted well: and he only complained of giddiness on raising his head from the pillow. He complained of air being forced through the ear on using his handkerchief, which made it rather painful. I desired him to take nothing but tea, (to which, I believe, he adhered for some days,) and to continue the aperient medicine. The speech was considerably affected from the paralytic affection of the muscles of the face, and he had no power of raising the eyebrow; the sensation, however, was not at all impaired. The pulse was tranquil, and there were no other bad symptoms.

October 2d.—My patient has gone on favorably for several days past, although I have had some difficulty in making him adhere to a system of abstinence. The face continues in the same distorted state; and I ordered cupping behind the ear to twelve ounces, and a blister.

It is unnecessary to detail the daily progress of the case: I will only state that, after the first ten days, my patient did every thing to make it go on badly, by taking wine to the extent of one, and sometimes two, bottles a day, which happily failed of doing material mischief. The wound of the scalp healed in a few days. It was necessary to order cupping to the nape of the neck, as the pulse became full and strong, from indiscretion in diet. I also ordered leeches to the root of the mastoid process, followed by a blister. This treatment produced considerable improvement in the face, which was gradually recovering its natural appearance when my patient left town for Paris, about a month from the time of the accident.

It is difficult to form an accurate opinion of the exact nature of the injury which produced such alarming symptoms. We can hardly suppose that any serious fracture of the basis of the skull could occur without being fatal; and yet it is difficult to conceive how the portio dura could be so deranged, and the membrana tympani ruptured, without some serious internal mischief. Certainly the latter may be occasioned by severe concussion, but the paralysis

of the portio dura is not so easily explained. It may, however, be consolatory to be able to refer to a case of this nature which admits a gleam of hope under the occurrence of symptoms most alarming and discouraging.

33, Montagu square; December 1829.

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DELIRIUM.

*Case of Delirium, in which large Doses of Opium were successfully employed.* By JOSEPH ASHLEY GAITSKELL, M.D.

A TRADESMAN of this city, widower, with six children, fifty-two years of age, tall, boney, very robust frame, and subject to occasional attacks of gout in his feet, acquired unexpectedly a sum of money, which enabled him to retire from business, and buy a country house, horse and gig, and, in short, to set up for a gentleman, thinking the sum inexhaustible. After expending a large sum in improving his purchase, it suddenly entered his mind to ask himself what would be the end of all this? The reflection disturbed him, and he became delirious. Although his property was still considerable for a man of his station in society, the delusion made him apprehensive of seeing himself and his children reduced to poverty; and his fears were aggravated by the thought of being brought to that unhappy state by his own folly. His feelings were so distressing that he threatened to destroy himself, and his manner and conversation were such as justly to alarm his family. During three or four weeks he had no sleep night or day; he was continually pacing his room, and incessantly lamenting his folly; conscious of his delirium, but incapable of controlling his thoughts or actions. In this state he went alone to London, where he remained a fortnight, restricting his diet to a few herrings. On his return, the distress of his mind was aggravated to such an extreme degree, that in his agony he wrote to a friend, entreating him to come and save him from self-destruction, and accused himself, in indefinite terms, of having committed some most dreadful deed. His friend came instantly to his rescue, and found him as above described. Having looked into his affairs, and finding there was little ground for this extreme despondency, and that argument was useless in restoring him to reason, his friend called on me to visit him, with a view to placing him in confinement, considering him as a lunatic.

I saw him in the evening of November 11th, ult. I found his mind as described: he was sweating profusely;

pulse seventy-two, soft, and rather weaker than natural; tongue extremely furred; bowels relaxed. He recognised me immediately, but positively refused assistance, saying "it was useless, his case was hopeless; medicine could do him no good; whoever sent me must pay me, for he could not." However, by the persuasion of his friend, he consented to take what I thought proper. I prescribed Camphor gr. iv.; Ext. Hyosiami gr. viij.; Potass. Nitrat.  $\mathfrak{ss}$ . quartis horis sumend. He took four doses in the course of seven hours, and passed the night better, dozing a little.

In the morning he was certainly better; but having finished his medicine, it had been discontinued some hours, and, at the time I saw him, he was in nearly the same state as on the previous evening. I desired the medicine to be continued every two hours, till he had taken eight doses more. At times he was much better, but the amendment was transient, and he still had but little sleep.

Next morning he was rather more rational. He complained of weight on the top of his head; said he had suffered from it more than a fortnight; and it was that pain or weight which took away his reason, and made him not know or say what he did. I ordered him Jalap gr. viij.; Sulphate of Magnesia  $\mathfrak{z}\mathfrak{j}$ . in Infus. Rosæ and Aq. Piment. It operated twice. He now became much worse, and alarmed his family more than ever; a convincing proof that all depletion was hurtful.

In the evening I ordered eight pills, with three grains of purified opium in each, one to be taken every two hours till sleep supervened. By mistake he took two pills at a dose, making twenty-grains of purified opium in ten hours, and with the happiest effect, producing sound sleep, from which he awoke in the morning as perfectly in his senses as ever he was in his life. The weight or pain at the top of his head was entirely removed. It may be supposed that the opium, being in a solid state, did not wholly dissolve in his stomach; but this was not the case, for, as it was very hard, the druggist was obliged to reduce it to powder, and make it into pills with conserve. Some vomiting occurred two hours after the last dose, which the patient attributed to taking a double dose of the hyosciamus and camphor, intermediate with the pills, unobserved by his attendants.

I now gradually withdrew the opium, by ordering one three-grain pill every two hours for that day; the following days I lengthened the periods, and reduced the quantities so as ultimately to dispense with it altogether; his recovery being complete.



The bowels becoming costive, I ordered jalap and aloes, each two and a half grains, every four hours: he took ten pills, which operated twice. Aloes is a very useful conjunct with opium, when required, as the one does not impede the operation of the other. In this case I ordered the aperient and the opium to be alternated every two hours: each was thus taken separately. Diet was ordered to be light, but nourishing, and, by his own choice, consisted chiefly of beef-tea and poultry.

*Observations.* Had this man been bled largely and much purged, his recovery would probably have been very protracted, even had he escaped with life. In the great majority of cases of this sort on record, bleeding and purging had been freely employed, anterior to the administration of opium. It must, therefore, be doubtful how far the previous treatment contributed to the recovery of the patient, by preparing them for opium. This case proves, as much as one instance can, that such previous treatment is at least not always necessary.

The quantity of opium taken in a short time is very remarkable, and leads to the question, what was the physical state of this patient who took, with benefit to his health, a quantity of opium, sufficient to have destroyed himself, and one or two other men, under ordinary circumstances? I think we must look for the explanation in the state of the nervous system, and that the disproportionate consumption of the nervous energy, or that peculiar something supplied by the nervous system, was the real and only difference; so that, in the event of death, no lesion of any structure would have been found in the brain. And it is as easy to comprehend the death of an individual from an inordinate exhaustion of nervous energy, in whatever that may consist, as from excessive loss of blood from outward wound. In the latter case, no one would expect to find disease of the heart, nor, in the former, ought we to expect change of structure in the brain. This nervous exhaustion is easily explained by the long privation of sleep, and intense thought consequent to the reflection on his extreme folly: it was at the same time aggravated by a considerable diminution of food, with increased bodily exercise. His usual habit was to live well, but he was not addicted to excesses of any kind.

The moral treatment is, I think, of much importance, and should be of the most soothing description, with as little constraint as possible. In this case I desired the patient might be allowed to walk about the house at his pleasure,

but be carefully watched, and sharp weapons removed from his reach. The necessity of these cautions was apparent, by his getting up one night to the garret window, which he opened wide, and possibly would have thrown himself out, had he not been followed by his attendant.

No words can express too strongly the impropriety of consigning such cases to a madhouse. In general such patients are docile, little disposed to injure others, and, with watchful care, may be cured without having recourse to a measure which is hurtful to the feelings of the sufferer to the end of his days.

When, by the power of medicines, reason has in some degree resumed its empire, the consolations of religion may be advantageously employed to aid and confirm her dominion, especially when, as in this case, attendance on public worship had been for years constantly neglected.

I cannot conclude without offering my humble acknowledgment to Dr. Abercrombie, for his invaluable work on the Diseases of the Brain, &c. and to the editors of the London Medical and Physical Journal, for having supplied us with the additions in the second edition. In works of this merit, I think it would be very acceptable to the possessors of the first edition, if the improvements of succeeding editions were made accessible to the purchasers of the first.

Justice requires we should give Dr. Sutton the credit of having first made the profession acquainted with the utility of opium in these cases; although he candidly acknowledges that he acquired the practice from others.

Bath.

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#### UTERINE HEMORRAGY.

*Case of frequent Uterine Hemorrhagy, with incessant Discharge of the Liquor Amnii, four months previous to Labour; with some Remarks on the Ergot of Rye.* By J. H. BURGESS, Esq. Surgeon.

Mrs. B., ætatis thirty-one, of spare and delicate habit, already mother of three children, was attacked, on the evening of the 10th of June, 1829, with slight uterine hemorrhagy, and discharge of the liquor amnii to a considerable quantity, being (as she supposed) about three months advanced in pregnancy. It was naturally expected that miscarriage would follow in a short time. She was ordered astringent medicines, perfect quiet in the horizontal position, an opiate, and the frequent application of cooling

lotions to the pubes and labiæ. There was no pain, nor could she account for such appearances, otherwise than from her having walked, the day preceding, a distance of three or four miles.

The treatment had the desired effect as regarded the hemorrhage, but the discharge of liquor amnii continued unabated.

All went on well until September 10th, when violent hemorrhagy returned. Mrs. B. was then desired on no occasion to leave her bed without permission; and the usual medicines being given, such as a full dose of Tinct. Opii, followed by Mist. Infus. Rosæ cum Acid. Sulph. dilut. &c. together with the lotion as before, the hemorrhage was again arrested.

On the 11th, Mrs. B. complained of considerable bearing down, with a sensation as though the fœtus would be instantly expelled; but, on examination per vaginam, it was discovered to arise from a large coagulum, completely filling up the parts. Fifty drops of Tinct. Opii were immediately given, and the coagulum suffered to remain, fearing its removal might endanger a return of hemorrhage. Shortly after taking the opiate, it produced sleep of two hours' continuance; when Mrs. B. awoke much refreshed, and free from hemorrhage, yet the liquor amnii continued draining away.

13th.—Pulse ninety-six, and feeble; bowels constipated; slight headach; heat of the skin; coated tongue, with occasional nausea.—Ordered Haust. Salin. in statu effervescentiæ tertiis horis, et Haust. Ol. Ricini cum Aqua Cinnamomii statim sumendus. The coagulum came off this morning. In the evening Mrs. B. appeared much better: has had three offensive feculent evacuations. Liquor amnii still discharging.

14th.—Appears better; no hemorrhage; liquor amnii still escaping; urine natural.

No material alteration occurred for many days. Liquor amnii continued flowing away. The patient was kept quiet, and occasional aperients were given. On the 24th, slight hemorrhagy without pain. It ceased spontaneously in about half an hour.

25th.—Was called up in the night, Mrs. B. having a return of hemorrhagy to an alarming extent; no pain. An examination per vaginam was instituted, when the os uteri was found apparently closed. The hemorrhage was arrested by the before-mentioned means, conjoined with a full dose of Tinct. Opii.

Mrs. B. went on from this period with unceasing discharge of the liquor amnii, and the occasional use of aperient medicines, until October the 6th, when I was again called in the night, from her having a return of hemorrhagy, still without pain. She fell into a state of syncope immediately on the application of the lotion to the pubes, remaining so for the space of two minutes. The discharge of blood, as is usual during fainting, had ceased, and did not now again return. An examination was made per vaginam, hoping to find the os internum gradually dilating, so as to admit of delivery; but no such occurrence had taken place, therefore it became impracticable.

7th.—Exhaustion appeared so great, it was deemed necessary to administer slightly cordial medicines, with Tr. Opii, and an occasional tablespoonful of wine. Liquor amnii still escaping; urine natural.

8th.—Somewhat better, but the uterine liquor still draining away.

9th.—As yesterday. Slept well during the night.

10th.—Bowels not moved since the 8th.—R. Haust. Oleos. statim, et rep. dosis si opus sit.

11th.—The bowels moved twice, bringing off a considerable quantity of hardened feces.

12th.—Complains of headach, preceded by slight rigors, followed by considerable heat of skin. Pulse ninety-six, and bounding; bowels not acted on to-day.—Ordered Haust. Salin. cum Magn. Sulph. 3i.; Tr. Digitalis gtt. vi. quartis horis sumend, donec alvus soluta fuerit.

13th.—Copious and offensive evacuations from the bowels, much to the relief of the patient. Pulse eighty; liquor amnii escaping as usual; urine natural.

14th.—Much better. Still desired not to leave her bed on any account.

All went on as on the 8th instant, with the occasional administration of aperient medicines, until the 23d, when I was sent for in haste, Mrs. B. appearing to her attendants in great danger. On arrival, found the countenance and general surface extremely pale; pulse frequent and feeble. Tinct. Opii gtt. iv. were immediately given in a little water, but was soon rejected by vomiting. Symptoms of labour were evidently indicated by slight pains occurring about every ten minutes, together with a great flow of the liquor amnii and violent hemorrhagy. This was about one o'clock P.M. An examination per vaginam was instantly made, and the os internum found dilated nearly the size of

a shilling; the hemorrhage at this moment profuse. The patient was placed on her left side, with hips much elevated, and, during each pain, a cautious effort was made to dilate the os internum, by means of the first and second fingers of the right hand. It was found, on the first effort to pass the finger within the uterus, that the placenta was firmly attached to its cervix; and, while pressing or drawing the os internum, (which was very rigid, more so than it generally is in cases of uterine hemorrhagy,) at its anterior part, toward the pubis, the bleeding was checked; and, keeping up such pressure, I waited some time, hoping the parturient efforts might increase; but, instead of which, the pains became gradually weaker and less frequent. I then determined to make trial of the ergot of rye, in decoction, of the following strength: *R. Ergot contus. ʒi. coque in Aqua ʒvi. ad ʒij.*; of which I gave ʒiss. and repeated the dose in ten minutes. Its effects were in this case more conspicuous than any other in which I have ever made trial of it, although I have frequently used it with marked success. In twelve minutes from the administration of the first dose, its action became manifest: to such a degree were the expulsive efforts increased, that in about five minutes more, the os internum was sufficiently dilated for the introduction of the hand; when it was cautiously and steadily passed by the edge of the detached placenta, and the head instantly felt resting above it, (the hemorrhage at this time profuse.) While endeavouring to reach the feet, with a view of expediting the delivery, such powerful contraction of the uterus came on, that it was found necessary to withdraw the hand, fearing such violent efforts might endanger laceration of the uterus, while acting on it. The moment the hand was withdrawn into the vagina, the fœtus followed (from the long continuance of such expulsive effort), and was happily delivered.

After applying a ligature to the funis, and removing the child, which was then alive, I made an external examination of the abdomen, when I instantly suspected the existence of another child; and, on examining per vaginam, found the membranes of a second fœtus brought down to the os internum. A pain coming on immediately, I ruptured the membrane, and a second child, together with both placentæ, were expelled instantly, with the greatest imaginable force.

The hemorrhage immediately ceased; and, on examining the placenta of the first child, it was found to have been separated to about one half of its area, and a considerable

part cicatrised; clearly proving the cause of such repeated and alarming hemorrhages.\* At the moment of writing this, Mrs. B. appears going on well.

The above case is, I believe, one of the most serious and perplexing that can possibly fall to the lot of any man to treat, or his patient to bear; and, from my not having seen, or even read of, a similar case in all its bearings, particularly as regards the continued draining of the liquor amnii for such an extraordinary period as four months, I am induced to give it publicity. In the cases which have fallen under my notice of premature rupture of the membranes, labour has invariably commenced within five days; but, in this case, the first discharge of the liquor amnii took place on the 10th day of June: labour did not commence until October 23d following; being, I believe, an unparalleled period of 135 days!

In regard to the use of the ergot of rye, I have found it, in many cases of uterine hemorrhagy and protracted labour, a medicine of the greatest use and importance; but caution in distinguishing the proper period and case for its employment is indispensable, not only as regards the safety of the mother, but the child. In all first cases, unaccompanied with hemorrhage, I should not be disposed to have recourse to it, until the os internum was fully dilated, or the parts in a proper state for its employment. In protracted cases of natural labour, where the pains appear inefficient, and no deformity exists, yet the os internum rigid, and not fully, or nearly so, dilated, (unless I found other symptoms of alarm,) I should wait patiently for the complete dilatation of the os internum before I tried the ergot; there being, I conceive, imminent danger of rupturing even the cervix uteri, from the violence of the throes when its action becomes fully developed. Yet, in all cases of uterine hemorrhagy, arising from causes before enumerated, where the life of the mother is in jeopardy, I believe, from the experience I have had, it may be administered, even before the complete dilatation of the os internum, with a happy result.

It has been said that the violent contractions of the uterus (after the administration of the ergot) cannot be restrained: this I am inclined to doubt. I believe opium to possess a sufficient antispasmodic influence to arrest its action in a

\* Query, whether the cause of delay in the commencement of labour may not be attributable to the continued distention of the uterus in consequence of twins, thereby allowing the constant escape of the uterine fluid from one membrane, while the second retained its natural magnitude.—J. H. B.

few minutes, especially after the expulsion of the contents of the uterus; as, in the case here detailed, the administration of fourteen drops of tincture of opium relieved the patient in ten minutes of the most violent after-pains. I have seldom found it necessary, as in this case, to repeat the dose; but would wish it to be clearly understood that, (as far as my judgment serves me,) in all cases where a trial of the ergot is had recourse to, the dose should be repeated in ten or fifteen minutes, if its effects are not fully established. Ample experience has taught me that the ergot is a very valuable medicine in the hands of the accoucheur who applies it with judgment and discrimination.

Glastonbury; November, 1829.

#### MIDWIFERY.

*Half-yearly Report of Cases in Midwifery, which have occurred in the Northern District of the London and Southwark Midwifery Institution.* By C. WALLER, Esq. Consulting Accoucheur to the above Institution, and Lecturer on Midwifery at the Medical School, 58, Aldersgate street.

1829.	No. Women delivered.	Sex of Children :		Born alive.	Stillborn.	Presentation.
		Males.	Females.			
July .....	21	11	10	20	1	{ 20 Natural 1 Foot
August....	34	16	18	30	4	{ 30 Natural 2 Breech 1 Funis & H. 1 Face to Pu.
September	26	11	15	25	1	{ Natural
October ..	33	18	15	32	1	{ Natural
November	37	22	15	35	2	{ Natural
December..	26	9	17	23	2	{ 25 Natural 1 Breech
Total ....	177	87	90	165	11	

DURING the first four months of this report, no case of interest occurred in the northern district of our Institution, with the exception of a fatal case of convulsions, in the eighth month of gestation. I was one morning requested to see this female, who was forty-one years of age, and was now pregnant for the first time. I found her with a feeble pulse, and an unhealthy florid-red appearance of the countenance. Her legs and thighs were enormously distended, from anasarcaous effusion; there was great irritability of stomach, and, when the vomiting was

urgent, she had occasional bleedings from the nose and mouth; her bowels were much constipated.

To relieve her legs, I made several punctures with a common sewing needle; and, with the hope of allaying the vomiting, and also of acting upon the bowels, I prescribed small doses of the sulphate of magnesia, giving directions to my pupil, Mr. Smith, to take a small quantity of blood from the arm, if the symptoms continued.

On the evening of the following day, I received an urgent message to visit her immediately, my informant stating that the patient was in fits; and on my arrival, I was told that the woman had been dead about a quarter of an hour.

At the commencement of the attack, a neighbouring surgeon was sent for, who had bled her in both arms, but without producing any mitigation of the symptoms.

With a small pocket bistoury I cut open the abdomen, and removed the child, but life was extinct.

The body was examined the next morning, the head with great care. From the sudden termination of the case, sanguineous effusion was anticipated: this opinion, however, was not correct; the blood-vessels were slightly turgid, and there was a generally œdematous state of the brain; in the ventricles there was also a small collection of fluid, and about three or four drachms (the quantity not measured) at the base of the brain. The abdominal viscera were perfectly healthy, the os uteri completely closed.

Two cases of what is absurdly called scirrhus adhesion of the placenta have occurred, one of them attended with a most alarming hemorrhage. This poor woman neglected to send for assistance till the child was nearly born, and on my pupil, Mr. BLAIR, arriving at her habitation, the infant was lying on the bed, and the blood pouring forth in immense quantities. Mr. B. very promptly applied cold and friction, and the discharge immediately ceased. As the placenta did not come away, my assistance was requested. The patient was lying in the state just described; the pulse very feeble, in fact, scarcely to be felt, but still not inordinately accelerated; the body generally was cool, but there was not that icy coldness which is so often met with in severe hemorrhagy. On examining the uterus externally, it was felt contracted to a certain degree, though of large size. As she had experienced pains, and the placenta had not been expelled, I introduced my hand, and with great difficulty succeeded in removing it: the attachment was so firm, that some little time was occupied in its separation.



Although the blood ceased to flow, the patient's condition was not improved; there was a distressing degree of faintness, although there was not complete deliquium; the pulse at times perceptible, at others not. Brandy, ammonia, and milk, were given her, with temporary advantage; but the patient soon relapsed. This state remained for upwards of four hours, when permanent improvement took place.

The propriety of performing transfusion was discussed, and my own opinion strongly expressed in its favor: not that what may be termed the mortal symptoms were actually present: there was not the deep and laborious inspiration; the cerebral functions were not disturbed; the patient remained tolerably quiet, being nearly free from jactitation, and her stomach for the first two or three hours retained the stimulus and the nourishment introduced into it. Still, hour after hour, no perceptible improvement took place in this female's condition, and, from the debilitated state she was in previous to her confinement, and from the immense quantity of blood she had lost, I felt confident that, although she might rally from the *immediate* effects of the hemorrhage, her ultimate recovery was rendered extremely doubtful, and I have more than once declared it to be my firm conviction, as sufficient trials have now been made to prove that the operation of transfusion is not necessarily dangerous, that we are called upon to perform it in cases of this kind, without waiting till the resources of our patient are drained to the last drop. Let it not, however, be supposed that I would recommend transfusion indiscriminately in all severe cases of hemorrhage: I am aware that in a very large proportion even of severe hemorrhages, it is by no means necessary; but I wish to caution the juniors of the profession against deferring it too long.

During the first few days after her confinement, this female appeared to be doing pretty well, with the exception of suffering from severe headach, and at the expiration of a week she was enabled, though with some difficulty, to sit up for a short time: she, however, felt extremely debilitated, had no lacteal secretion, and her bowels were occasionally very irritable. Her strength declined, and, from her lying in bed, the skin about the hips gave way, and considerable sloughs were formed, which added greatly to her sufferings, and she is now (four weeks after her confinement) lying, I fear, in nearly a hopeless state. Would this effect have been prevented if the operation of transfusion had been performed?

In two instances the child descended with the face op-

**Dr. Hutchinson's Case of Intestinal Obstruction. 123**

posed to the symphysis pubis, and the occiput to the sacrum: in one, the pains were very severe, and the child, after a few hours, was born without assistance; in the other, there were no strong bearing-down efforts, which rendered it eventually necessary to deliver with the forceps: this was accomplished by my friend and colleague, Mr. DOUBLEDAY, (in my temporary absence from town,) and both mother and infant went on favorably.

Several cases of abdominal inflammation have occurred, some peritoneal, others uterine: they were, however, attended with considerable power, and therefore the usual remedies, viz. bleeding, with the internal administration of calomel and opium, were in every instance successful.

Two cases of retained placenta have been reported; in both of which its detachment and expulsion appeared to have been effected by the exhibition of two of my usual doses of the secale cornutum (twenty-five grains of the powder) in warm tea. I was present at one of them; the other was under the superintendence of my industrious and intelligent pupil, Mr. SMITH.

93, Bartholomew Close; January 1830.

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**INTESTINAL OBSTRUCTION.**

*Case of Intestinal Obstruction, caused by Stricture of the ascending Colon.* By R. S. HUTCHINSON, M.D. Member of the Royal College of Surgeons, London, and of the Royal Medical Society of Edinburgh, &c.

MASTER H., ætat. eleven, a pupil in the academy of the Rev. C. Fletcher, on the morning of the 16th September, first complained to one of his schoolfellows of indisposition, having a slight headach; but he ate on that day a very hearty dinner, and played in the afternoon for some hours at cricket with great alacrity, and in the evening appeared perfectly well. On the morning of the 17th, he again complained that his head ached, and after breakfast was sick, rejecting only what he had taken. A gentle aperient was given him, which, however, did not operate; and Mr. Wanich, member of the Royal College of Surgeons, was sent for to see him, who ordered a pill with four grains of calomel to be taken at night, and a common aperient draught early in the morning. The draught did not remain upon the stomach; but, after taking it, a small and somewhat costive motion was passed, and the boy expressed himself as much better; but his bowels not being again acted upon, he was ordered a repetition of the calomel.

At six o'clock on the morning of the 19th, he first com-

plained of some pain in the bowels; when he was bled to about seven ounces; castor oil and other aperients were administered, which produced, in the middle of the day, a small, watery evacuation.

The pain continuing until the evening, I was requested to see him, and at six o'clock found him with the following symptoms: He complained of pain, not generally over the abdomen, but principally situated on the left side, not increased on pressure; the belly felt somewhat hard and distended. On examining the external abdominal ring and umbilicus, I found no appearance of hernia. The pulse was beating 110 in a minute, small, and easily compressed, resembling that of a person who had recently suffered some sudden injury or shock, before reaction takes place. The tongue was generally whitish, no redness either at the tip or edges; the countenance pallid, and rather anxious; skin cool. The pain was not acute, but productive of great restlessness; the sensorium perfectly undisturbed. Blood drawn in the morning exhibited no appearance of inflammation. He was ordered, after the warm bath, hot fomentations to the belly; bottles of hot water to the feet; a few spoonfuls of strong beef-tea occasionally; and to take, every half-hour, two grains of calomel, with four of compound extract of colocynth.

Eleven o'clock P.M.—Remained in the same state: bowels not acted upon; medicine and beef-tea retained. A solution of one ounce and a half of Epsom salts, in six ounces of Inf. Sennæ, was prescribed, two spoonfuls of which were to be taken with each dose of calomel and colocynth; an injection, consisting of a pint of gruel and half an ounce of castor oil, to be administered every two hours.

These medicines were continued during the night, the stomach retaining them. A greater part of the injections passed away, but unmixed with any feculent matter; nor did the medicines at all act upon the bowels.

On the morning of the 20th, the abdomen was hard, tumid, and generally painful; no relief experienced from the fomentations; now tender on pressure, and disliking the flannel, which was used as a vehicle for the hot application. I therefore changed it, and applied over the belly a bag containing scalded bran; the weight of which, however, the patient could not bear. Pulse 124, smaller, and more thready; warmth more perfectly re-established over the whole body; restlessness increased; the countenance more anxious; eye intelligent, and sensorium free.

Eight o'clock A.M.—I gave him, with ten grains of calomel, two drops of croton oil, which were repeated every half-hour, until he had taken eight drops. About noon, slight sickness came on, which was generally suppressed by the timely application of pressure upon the stomach. He was troubled also with slight hiccup. Since ten o'clock, small quantities of wine and water had been administered, and occasionally doses of æther, when the hiccup was most troublesome.

Twelve o'clock.—I ordered a mixture with an ounce and a half of Sp. Terebinth. mixed with six ounces of peppermint water, by means of the yolk of an egg; three table-spoonsful to be taken every hour; and an injection with one ounce of the turpentine and a quart of gruel, to be immediately administered.

At this time another medical man was called in consultation, who supposed that the obstruction of the bowels might be caused by an insidious inflammation, and that the pulse would be found to rise, and become more full, by the abstraction of a small quantity of blood. Ten leeches were ordered to be applied to the belly, and be allowed to remain, if the pulse should appear to warrant their continuance. After being applied a few minutes, the pulse became evidently affected and sinking, and the patient faint: they were immediately removed, and the bleeding suppressed by continued pressure kept upon the orifices. Some brandy and water was given, but the pulse continued low and feeble, and our little patient appeared evidently and gradually sinking. Clysters with turpentine and large quantities of fluids were injected, with much force, by the patent syringe, to endeavour mechanically to overcome the obstruction: the bowels, however, remained unacted upon. The patient continued perfectly collected, but the vital powers gradually sinking. Sickness did not come on until about seven o'clock in the evening: when in the act of raising himself suddenly to vomit, and saying he felt as if he could scarcely speak, he sunk down on his back, and died, thirty-seven hours from the commencement of the pain in the belly.

*Examination of the body, forty hours after death.*—The corpse externally presented the appearance of a remarkably fine youth, who had died suddenly. No great tumefaction or hardness of the belly.

On opening the abdomen, no marks of general inflammation appeared; but from two to three inches of the lower portion of the ilium, on the peritoneal coat, the vessels were

much injected, and some shreds of coagulating lymph were attached to it; the mucous membrane in the same situation was slightly reddened. There were no adhesions between any portions of the small intestines. Upon tracing the intestinal canal along the colon, the cause of all the mischief became evident. At the upper part of the ascending colon, about two inches before that intestine commenced to cross the abdomen, and form its transverse arch, a band, or prolongation of the peritoneum was seen to cross from one side of the gut to the other, attached on the right side to that part of the peritoneum which, passing from the ascending colon, is continued lining the abdominal muscles, to the opposite or left side of the intestine. Thus this portion of the ascending colon was included in a ligature, almost as perfect as if a string had been tightly bound around it. The band which formed the stricture was about six lines in width, uncommonly strong, and not injected with red blood-vessels, but having exactly the same appearance as a healthy portion of peritoneum. The intestine in its immediate neighbourhood was only very slightly inflamed, and no evidence of inflammatory action existed in any other portion of the large intestine. Before the stricture was divided, the opening left by it in the colon was so small as not to admit the tip of the little finger, or even a good-sized quill; but when the band was cut through, the intestine, by the elasticity of its coats, resumed its natural caliber. No thickening of the coats had taken place, nor was there any deposit between them. The cæcum was distended by the presence of the ingesta, and its contents smelt strongly of turpentine. No scybala were found in any part of the canal. The rest of the abdominal viscera were perfectly healthy.

It will be found very difficult to give a satisfactory explanation how the stricture in this case was formed. If it was the product of inflammatory action, a short period only can have been allowed for its appearance. On the 16th of September, the patient was well enough to play actively at cricket; on the 18th and 19th, the bowels were acted upon, though but slightly; on the 20th, he died. The band itself had no appearance of lymph which has become organised, but in every respect resembled in appearance healthy peritoneum, from whence it seemed to be a mere elongation or process. Nor can this case, I fear, be adduced as any guide to us in future practice; for although, if we could have positively ascertained the precise situation of the stricture, its division might have been attempted with as

much safety as in a case of strangulated hernia, and would have, I am convinced, ensured success if early performed, yet no guide to its situation existed: the pain was principally referred to the left side, although the seat of stricture was in the ascending colon, and of course on the right. I have been induced to offer this case to the consideration of my medical brethren, as one which I have not found recorded in medical works, and as a pathological fact which probably may explain some otherwise obscure case of intestinal obstruction, when positive means of ascertaining the truth may not be allowed.

That this is not a solitary instance of intestinal obstruction from a similar cause, I have had an opportunity of knowing; for some years back, when I was demonstrator in the Webb-street School of Anatomy, I was requested by Dr. Southwood Smith to go with him to examine the body of a woman, housekeeper to one of the city aldermen, who, he told me, had long since laboured under supposed chronic disease of the liver, but for three days had suffered from obstruction of the bowels, which had resisted every means employed to overcome it.

The subject had been a woman of about sixty years of age. The abdomen was greatly distended, and very hard, with much fulness on the right side, as from a greatly enlarged liver. Upon opening the abdomen, the right side of the transverse arch of the colon started into view, distended to an enormous extent, and capable of containing many quarts. From the under part of the greater curvature of the stomach, and near to its cardiac extremity, a band, similar in most respects to the one I have attempted to describe in the former case, passed downwards, and surrounded the portion of the transverse arch of the colon immediately beneath it, forming a firm, unyielding stricture: beyond this, the intestine was healthy and empty; the liver undiseased, and not enlarged. In this case no thickening of the coats, nor deposition between them, existed.

*Southwell, Notts.; December 28th, 1829.*

## HOSPITAL REPORTS.

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### WESTMINSTER HOSPITAL.

IN our Number for December, we gave the dissection report of the limb and tumor of Amelia Becket. On opening the body fourteen days afterwards, the same disease appeared to have affected the lungs and the liver. There were several tubercles on the surface of the lungs, some of the size of a walnut, containing a whitish medullary matter; one of them adherent to the ribs. Those on the liver were smaller, and not so far advanced. This dissection renders it doubtful whether the operation would have been successful, if it had been done at an earlier period. The disease being evidently constitutional, a question may arise as to the probability of its having been so originally, or as to its having become so from the continuation of disease.

The following case is interesting on account of the fact of vomiting having accompanied so well marked a case of compression; a point to which Mr. Guthrie drew the attention of the students in a particular manner, as being one which many persons were induced to dispute, and some to deny.

Thomas Sullivan, aged fifteen, admitted December 4th: he had fallen from a scaffolding forty feet high, and was insensible, his head swollen, the scalp torn, the bones broken and depressed, and the brain coming through the external wound; the breathing stertorous, pulse imperceptible; bleeding from the right ear, and, shortly after his admission, vomiting. Mr. GUTHRIE, on his arrival, sawed off, with Hey's saw, two points of bone; and then raised the depressed portion, which however immediately returned to nearly its former state, on the removal of the levator, the bone appearing to be bent. This was obviated by keeping the bone steadily elevated for several minutes by the end of the lenticular, when the bend was found to have been overcome; a use for that instrument to which we have never seen it before applied. The fracture was now found to have separated the mastoid process from the body of the temporal bone, and the brain was also coming through the ear. The case was considered hopeless, and the boy died a few hours afterwards.

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### HOPITAL DE VERSAILLES.

#### *Aneurism of the left Common Carotid, cured by Ligature.*

A SOLDIER, named Antoine Bolfig, ætat. forty, related that, a month before his admission, while he was playing with one of his comrades, he was roughly seized by the throat. He experienced great pain at the moment: and, since this occurrence, he perceived a swelling in the part, which continued to increase in size. M. Noble the head surgeon of the hospital directed the patient to be

treated according to the plan of Valsalva. Leeches were freely applied, and the tumor was covered with ice, &c.

Notwithstanding the adoption of these means, the tumor daily increased, and at length produced so much distress, by pressing upon the larynx and œsophagus, that the patient urgently requested to be relieved by some more effectual treatment. The tumor was situated at the upper part of the left side of the neck: it extended from the mastoid process to the middle of the neck, opposite the base of the larynx, and transversely from the angle of the jaw to the symphysis of the chin, throwing the sterno-cleido-mastoideus outwards, and pressing back the larynx. Throughout the whole extent of the tumor, a strong pulsation was perceptible, which was synchronous with the action of the artery at the wrist. The distended skin preserved a natural appearance. Pressure below the tumor caused the pulsation in it to cease, and sensibly diminished its volume. The general state of the patient was favorable: he complained only of pain on the left side of the head, and of great difficulty in swallowing and breathing. In other respects he was in good health, very anxious for an operation, and with a firm determination to support it with courage. On the 20th November it was performed in the following manner.

The patient was placed upon a bed, his head and trunk being elevated. M. MAURIN made an incision about three inches long, in the direction of the anterior margin of the sterno-cleido-mastoideus, from the inferior part of the tumor down to the clavicle. The cellular tissue laying between the sterno-mastoid and the sterno-hyoideus muscles was then carefully divided. The omo-hyoideus was raised upwards with a spatula, with which was also divided the sheath formed by the cellular tissue which envelops the external jugular vein, the pneumo-gastric nerve, and carotid artery. The carotid was completely insulated from the surrounding parts, and with a female catheter, armed with a double thread, *two* ligatures were placed under it. Upon tying the ligature, the pulsation of the tumor entirely ceased. One ligature was tied an inch below the part where the omo-hyoideus muscle passes over the artery, and the other upon a level with that muscle. Not more than an ounce of blood was lost during the operation, which was not retarded by any accidental occurrence. The wound was immediately closed, the ligatures being left hanging out.

One hour after the operation, the patient was calm; pulse sixty-five. In four hours the inferior extremities were cold, and there was a sensation of oppression and tightness in the epigastric region, with some pain in the left arm; pulse sixty-eight. No pulsation in the tumor, the size of which was much lessened.—An ethereal mixture. The inferior extremities to be rubbed, and covered with flannel.

At seven o'clock in the evening, eight hours after the operation, there were general sweat, cough, frequent expectoration of mucus,



great heat of skin, pulse sixty-eight. At nine o'clock, great oppression in the epigastrium, intense headach, face flushed on the right side, pulse quick.—Twelve leeches to be applied to the epigastrium.

21st.—Has been quiet during the night, but had no sleep. Oppression diminished, expectorates more freely, pulse hard and frequent, face flushed. In the evening, his cough increased, pulse eighty; pain in the head and epigastrium increased.—To be bled to eight ounces, and to take a pectoral mixture, with syrup of poppies.

22d.—Has passed a sleepless night, is much oppressed; great pain in the epigastrium, headach. Pulse hard, and 100; throbbing of the left temporal artery. The unpleasant odour and abundance of the suppuration rendered it necessary to remove the dressings. The centre of the wound was superficially united.

Evening: V.S. from the arm. Emulsion continued.

Until the 30th, the patient went on well. The tumor had much diminished in size. The wound looked healthy, suppuration less abundant, and of good quality. The upper ligature came away on the 29th.

December 1st.—Has had a bad night; pain and oppression in the epigastrium returned. Cough frequent, and without expectoration. Pulse ninety-five, and hard.

2d.—Better in every respect. An enema was given, as the bowels had not been open.

From this time no remarkable symptoms occurred. On the 15th December, the wound was entirely healed; the tumor was reduced to about the size of a small hen's egg. At the time the case was reported, the patient had not left the hospital, as he was affected with slight catarrh, which he had caught by walking about the wards.—*Revue Medicale*.

The manner in which aneurism of the carotid was caused in the above case is somewhat singular, although the effect produced by the operation leaves no room to doubt the nature of the disease. To the application of *two* ligatures, we decidedly object: we thought, indeed, that this practice had been entirely banished from modern surgery, and it appears evident that in this instance it was injurious, by interrupting the favorable union of the wound. Experience has amply proved that *one* ligature is quite as effectual, and quite as safe, in every respect as two.—EDITOR.

#### MANCHESTER INFIRMARY.

##### *Case of Paralysis cured by Strychnia.*

JOHN PRINCE, twenty-nine years of age, spinner, admitted an in-patient September 13th, 1824, was seized, about six months ago, with loss of power in the lower extremities, after bathing, whilst the body was much heated with exercise. He is now incapable of

motion without the aid of crutches. He passes his urine and feces involuntarily. The spine is free from pain. His strength is much reduced; appetite bad; pulse seventy-two, and rather feeble. I directed him to take Pil. Hydrargyri four grains each night, with a saline aperient on the following morning, for the first ten days. On the 24th, I commenced with the strychnia, in the dose of a sixth of a grain, three times daily.

October 4th.—The alkali has not produced any effect upon him. Appetite somewhat improved; in other respects he remains in the same state as on his admission.

10th.—Strychnia augmented to the fourth of a grain every fourth hour.

14th.—Has experienced severe convulsive twitchings in the affected limbs. He is sensible of an increase of power in his inferior extremities, and wishes to rise and make trial of his crutches.

22d.—Is very much better. Strychnia to be taken in the proportion of half a grain three times daily.

November 4th.—During this interval the alkali has been attended with great benefit. He is now capable of retaining both urine and feces, and of walking from one end of the ward to the other with the aid of a small stick. His appetite is good, bowels regular, and spirits cheerful. To continue the alkali.

16th.—He is entirely cured. In order to show the pupils of the hospital what he could do, he ran from one end of the long gallery to the other. I ordered him to be discharged at the first meeting of the weekly board.

I had an opportunity of seeing this patient several times after he left the house, and was glad to find that he continued to enjoy the perfect use of his lower limbs.—*Bardsley's Hospital Facts.*

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*Cases of Neuralgia, in which the Acetate of Morphia was successfully employed.*

I. ANN JONES, forty-five years of age, unmarried, had enjoyed a tolerably good state of health previously to last April (1826), when she was first seized with an acute pain, shooting from the fore part of the left cheek to the ala of the nose and angle of the mouth of the same side. Since that time she experienced a return of the pain, at least once each week, until within the last two months, when it has recurred several times daily. Her general health is much impaired by the constant irritation of the complaint, and her flesh and strength are greatly reduced. She has been in the habit of taking ether in large doses, from which she has mostly derived a temporary mitigation of her agony. Leeches, blisters, moxa behind the ear, opiate liniments, friction with the lead ointment (as recommended by Mr. Bedingfield,) were first employed externally, and subsequently purgatives, antispasmodics, tonics of various kinds, and carbonate of iron internally, but with little or no benefit.

Under these circumstances I commenced with the acetate of morphia, in the dose of a quarter of a grain every second hour. In the course of two days the proportion was increased to half a grain at the same intervals. On the third day, the beneficial effects of the remedy were duly appreciated by the patient. She persevered with the dose of half a grain, twice daily, for more than three weeks, at the expiration of which time the disease had completely yielded to the influence of the morphia. She has remained well ever since.

I only found it necessary to order her opening medicine twice during the above period.

II. Mary Williamson, fifty-two years of age, admitted a home-patient, June 6th, 1825.

She was attacked, about three months ago, with a severe lancinating pain in the situation of the right mental foramen, which continued for several hours, and then ceased. It returned, however, on the next morning with aggravated violence, and left her again in the evening. As the pain extended to the teeth on the same side of the jaw, she had been persuaded to have two of them extracted, but the operation afforded her no relief. The remaining teeth appeared to be perfectly sound. When she came under my care, the least degree of motion, or any attempt at mastication, caused a return of pain. Her general health was much impaired, from the constant irritation to which she was exposed, and she had lost both flesh and strength. Feeling satisfied, from the above symptoms, that the inferior dental nerve was affected, I resolved upon the employment of the acetate of morphia. She was accordingly directed to commence with a quarter of a grain every fourth hour, after the bowels had been freely opened by purgative medicine.

June 20th.—She has had no pain during the last seven days, and can now eat and take exercise without fear of its recurrence. Appetite better; bowels regular. Half a grain of the salt to be taken once daily.

July 12th.—She is in her usual state of health. Ordered to be discharged cured.

I saw this woman several times afterwards, and was glad to find that the pain had not once returned.—*Ibid.*

## CRITICAL ANALYSES.

Omne laudanda forent, et quæ culpanda, vicissim  
 illa, prima, cretâ; mox hæc, carbone, notamus.—PERSIUS.

*A Treatise on Poisons, in relation to Medical Jurisprudence, Physiology, and the Practice of Physic.* By R. CHRISTISON, M.D. Professor of Medical Jurisprudence and Police in the University of Edinburgh, &c.—8vo. pp. 698. Edinburgh, 1829.

*Die Lehre von den Giften, in medizinischer, gerichtlicher, und polizeylicher Hinsicht.* Von Dr. K. F. MARX, Professor der Heilkunde an der Universitaet Göttingen. 1er band, 1te abtheilung. Göttingen, 1827.—*A Treatise on Toxicology, in relation to Medicine, Jurisprudence, and Police.* By Dr. K. F. MARX, &c. Vol. I. Part I.—8vo. pp. 270. Göttingen, 1827.

*An Essay on the Operation of Poisonous Agents upon the Living Body.* By JOHN MORGAN, F.L.S. Surgeon to Guy's Hospital: and THOMAS ADDISON, M.D. Assistant Physician to Guy's Hospital.—8vo. pp. 91. London, 1829.

THE three works, the titles of which we have prefixed to this article, are important contributions to our toxicological knowledge. The first, which is a complete systematic treatise, is throughout worthy of the author's previous reputation. Comprising a far more extended literature of the subject than any previous toxicological work can pretend to, it contains, at the same time, more ample details of the effects of poison on man, derived from the author's medico-legal experience; for Professor CHRISTISON has probably been consulted in a greater number of cases of poisoning, subjected to juridical investigation, than any other British practitioner. The Experimental Essay on Poisoning by Oxalic Acid, published conjointly by Dr. COINDET, of Geneva, and himself; and the elaborate and masterly Essay on Arsenic, contained in vol. ii. of the Transactions of the Medico-Chirurgical Society of Edinburgh, had placed the Professor's talents for toxicological investigation in a very favorable point of view: and the perusal of the present work will not fail to convince all impartial persons, that the same acuteness of judgment, accurate chemical knowledge, and extensive reading, which the author formerly displayed on isolated branches of

toxicology, have been brought, in this treatise, to the elucidation of the science in general.

The original chemical details contained in this treatise are particularly valuable, and cannot fail to be most acceptable to practitioners. The author has evinced a thorough practical acquaintance with the methods of detecting *minute* quantities of poisons in *complex* fluids, and has simplified and perfected the methods of analysis previously suggested by ORFILA and others. The processes he has related are delicate, conclusive, and easily managed. Some are novel and preferable to any previously proposed, and there is scarcely any, the accuracy of which he has not ascertained by frequent trials, under most difficult circumstances.

The second work is by Professor MARX, of Göttingen, the erudite author of the "Origines Contagii." It is as yet incomplete, the portion of it before us being only the first part of the first volume. It is distinguished by the general peculiarity of the German school, that is, by a profound acquaintance with the whole literature of the subject, good and bad; an historical view of which is presented to the reader, without that critical sifting of the chaff from the grain, which by the authors of other countries would be deemed requisite.

This work is intended by Professor Marx to comprehend a view of toxicology in all its relations. As a preparation for it, he remarks, that he has been for many years occupied in considering the subject, and in observing cases in medical practice. He has undertaken a series of experiments on various animals, for the elucidation of the more interesting and complex subjects of toxicological inquiry. He proposes to investigate the *modus operandi* of poisons; the causes of the varieties in their action; to ascertain the medium, that is, the systems or organs, through which poisoning takes place; what are their characteristic symptoms; what effects are produced by them in the body, as ascertainable by post-mortem examination, and the mode of cure, whenever that is practicable. This investigation, with the completion of the general historical details, will occupy the first volume. In the second, poisons will be treated of specially: and under the several poisons, it is proposed, after having given a view of the literature of each, to ascertain its *modus operandi* in man, as well as in animals; the symptoms which it produces; the causes of death, and the kind of death; the post-mortem appearances in man and animals; the mode of treatment; their use as an article of

the *materia medica*, under which head the dose in which it is poisonous will be indicated. The foreign names and most important synonyms will be given, chiefly with a view to illustrate the writings of the ancients. The author has extended his literary inquiries into writings devoted exclusively to criminal jurisprudence, and into the voluminous "*Acta Sanctorum*;" and from these sources he will derive many curious and some useful facts. A work so comprehensive, executed by a man of talent, judgment, and learning, cannot fail, when completed, to be acceptable to the profession.

The essay of Messrs. MORGAN and ADDISON has been written under a strong impression of the importance of the object of their inquiry; which appears to them to be not merely a question as to the medium by which poisons operate on the animal economy, but also as to the mode in which all morbid phenomena are produced in the system; in short, to involve the elucidation of morbid phenomena produced by local agents, of every description, upon the living body. It is designed, then, to illustrate the theory of medicine. Their essay is divided into two parts: a refutation of the theories of former experimentalists, and an experimental attempt to establish their own.

Of the importance of toxicology as a science, it is almost superfluous to offer an observation. Independent of the absolute necessity of its cultivation in relation to medical jurisprudence, it has unquestionably supplied the groundwork for an improved theory of the *materia medica*. The *modus operandi* of remedial agents was very imperfectly known prior to the modern investigations of toxicological experimentalists; and a proof of this assertion may be gathered from a view of the opinions contained in the works of Cullen, and even Murray. The general fact that agents, however applied, have the same kind of operation on the living body, was formerly unknown; and the study of their physiological actions has much contributed to illustrate their therapeutic operation. "The study of toxicology," says Dr. Christison, "has led to the rejection from the practice of medicine of a host of popular remedies, the offspring of empiricism, which were either totally useless or positively prejudicial."

The object of the science of toxicology is fourfold: it supplies antidotes for the various poisons; it furnishes the physiologist with valuable instruments of research in his investigations into the laws of the animal economy; it aids

the physician in his inquiries as to the action of many energetic drugs; and it collects from the numerous branches of medical knowledge, as well as from collateral sciences, the materials of the most important department of medical jurisprudence.

Dr. Christison considers that toxicology has been more successfully cultivated than any other branch of medical jurisprudence, and chiefly because the opinions of medical men have more influence than in any other variety of judicial proceeding. In cases of poisoning, many causes combine to concentrate the weighty part of the proof in the medical evidence. The proof of the fact, or of death having been occasioned in the manner alleged, can very seldom be drawn, as in other cases of homicide, from general evidence, or from any thing else than medical testimony. This evidence is the more important, that the proof of poisoning also commonly infers proof of the intent: for on such trials it is impossible, as in other trials, to entertain the question whether death was the consequence of deliberate purpose, or of sudden fury, or of an act of self-defence.

After a luminous exposition of the objects and importance of toxicology, Dr. Christison proceeds to develop the views which have influenced him in the composition of his work. Having alluded to his own frequent medico-legal engagements, as some warranty for executing the present treatise, he comments on the omissions of practical points in existing works, possessing in other respects high reputation and scientific excellence. Some inquiries have not been noticed at all, and others very cursorily handled; and these defects he ascribes to the attention having been too exclusively turned to the means by which particular poisons may be proved to have been the cause of death; whereas, the questions which actually occur in medico-legal practice are much more diversified. Dr. Christison has endeavoured to supply these defects, in his chapters on General Poisoning and on the Diagnosis between the Effects of the Irritant and Narcotic Poisons and the Effects of Natural Disease.

Medical testimony is required, first, before the coroner in England or the sheriff in Scotland, as a sort of preliminary investigation; and, secondly, before the higher criminal courts. In the former, the question to be decided is, whether there is a certainty, probability, or possibility of poisoning, in a general sense. In the latter, the prisoner is charged with administering a particular poison. But in

some instances the evidence of the particular poison is merely presumptive, and that presumption not strong, so that the charge is substantially one of poisoning in a general sense; and convictions have been obtained in some trials in Scotland, where no satisfactory proof existed what poison had been given.\* Dr. Christison dissents from the opinion expressed by almost all continental medical jurists, who affirm the insufficiency of the proof derived from the evidence of general poisoning alone. "It is very likely," he admits, "that the proof of general poisoning from medical evidence alone, can never amount to more than a strong probability. But the medical probability may be so high that, in conjunction with other circumstances of general evidence, no rational being can entertain a doubt that poisoning has been perpetrated."

The chapter on General Poisoning contains valuable practical remarks, which will be sought in vain in ORFILA, or other writers on toxicology. (Vide Orfila, *Toxicologie générale*, ii. 605.) When the charge made is of poisoning by some particular poison, it is investigated by chemical analysis, by the morbid appearances found in the dead body, by the symptoms during life, and by the effects of the suspected poison on animals. Dr. Christison has thus arranged his investigations of particular poisons.

In treating of the symptoms observed in man, Dr. C. has not followed the example of Orfila. The latter has transcribed a list of complete cases: the former has given a general account of the effects of each poison. We think a few *selected* cases preferable to either plan, as conveying instruction in a more natural and striking form. The operation of many poisons is various in different individuals, but the differences are referrible to a few varieties; and the narration of an example, as it occurred in practice, of each variety of the mode of action of each poison, would convey clearer and more impressive instruction than any artificial grouping of the symptoms, however skilfully executed. Professor Orfila's mode has unnecessarily expanded his work: Professor Christison's presents an assemblage of symptoms never occurring in any one single instance. Dr. Christison has added valuable information on the shortest and longest known intervals within which poisons begin to operate, and on the longest and shortest known periods within which they prove fatal. This kind of information is not to be met with in any previous

\* Vide Christison, pp. 42, 64, and 71.



systematic treatise on Toxicology. He has discussed also the *treatment* to be pursued in the principal varieties of poisoning. We proceed to analyse the work more closely.

It consists of two parts, to which is added a brief appendix. The first part treats of general poisoning, and is divided into three chapters, of which the first treats of the physiological action of poisons; the second, is "of the evidence of general poisoning," as ascertainable by symptoms, by morbid appearances, by chemical analysis, and by moral proof; and the third, treats briefly of "imaginary, pretended, and imputed poisoning."

Part the second includes the individual poisons, and consists of thirty-eight chapters. Chapter the first is on the Classification of Poisons, which our author, adopting physiological action as the most convenient basis of arrangement, has divided into irritant, narcotic, and narcotico-acrid, properly rejecting the class of septic, which Orfila had admitted. The same distribution has been adopted by Professor Bernt,\* and there can be no doubt of its superior accuracy, whether practical utility or scientific accuracy be considered. In detail, it may be open to some objection; but it is the only arrangement which connects the poison intimately with the symptoms and pathology.

Chapter the second treats of Irritant Poisons generally, and contrasts the symptoms and morbid appearances of natural disease with those produced by this class of poisons. Then follow the most important individual poisons of the class, and these occupy the work down to the twenty-fourth chapter. The twenty-fourth chapter is on Narcotic Poisons, and contrasts the effects of them with the effects of natural disease. This class occupies five chapters. Chapter twenty-ninth takes up the subject of the Narcotico-acrid Poisons, and they are continued through the nine succeeding chapters.

To attempt a detailed analysis of a work so comprehensive, would be inconsistent with the limits which can be assigned to it in our Journal; nor, indeed, would it be very practicable to give a clear and instructive abstract of the whole treatise, which will be readily understood when we state that the skilful condensation of the materials collected

\* *Venena corrosiva; stupefacientia vel narcotica; et corrosivo-stupefacientia.* (Bernt's "Systematisches Handbuch der gerichtlich. Arzneikunde," 199. Dr. Marx has divided them into irritant or corrosive, narcotic, narcotico-acrid, and "austrocknende," desiccating, we presume, though what can be comprehended under this class we cannot divine, and his work has not proceeded far enough to furnish any illustrations.

by the authors' extensive research, is one prominent excellence of the work. Hence we shall confine our remarks to a few leading subjects.

In the chapter on the Mode of Action of Poisons, Dr. Christison divides their operation into *local* and *remote*. The local effects are of three kinds. They *corrode* or chemically decompose the part to which they are applied; or, without immediately destroying its organization, they *inflame* or *irritate* it; or, without producing either corrosion, inflammation, or irritation, they make a peculiar impression on the sentient extremities of the nerves, unaccompanied by any visible change of structure. Many of the irritants (as arsenic, for example,) are, in common speech, called corrosives, but they do not occasion chemical decomposition: it is by means of inflammation, and its effects alone, that any breach of continuity is produced.

Dr. Christison adopts the term *remote*, in preference to the more common phrase, *general* action, because the latter implies an action on the general system, or whole body. Such an affection of the entire system is, however, rare: it is one or more of the important organs only which suffer from the indirect action. This remote action of poisons is well illustrated by the effects of oxalic acid. Concentrated oxalic acid acts as a corrosive by destroying the gelatine of the animal textures, yet it never kills by destroying the function of the stomach. It has proved fatal to man in ten minutes, and to a dog in three. Nor does it always induce, when swallowed, symptoms of an injury of the stomach; for death is often preceded by tetanus or apoplexy, or mortal faintness. Hence death commences, so to speak, in the spinal marrow, brain, or heart; and, in fact, death is most rapid under circumstances in which the stomach is least injured, namely, when the acid is considerably diluted.

Concerning the channel by which the remote influence of poisons is excited, some fluctuation of opinion has taken place. Until very recently, the opinions of modern toxicologists has been very much guided by the experiments of MAGENDIE; and scarcely has any one hesitated to assent to the opinion that poisons are transmitted by venous absorption into the circulation, and thence conveyed to the brain or other organ remotely affected. Lately, however, this hypothesis has been controverted by Messrs. Morgan and Addison, in the essay to which we have already alluded. The theory which these gentlemen believe to be most consistent with sound reasoning, and also fairly deduced from

experiment, is contained in the following proposition: "That all poisonous agents produce their specific effects upon the brain and general system through the sentient extremities of nerves, and through the sentient extremities of nerves only; and that, when introduced into the current of the circulation in any way, their effects result from the impression made upon the sensible structure of the blood-vessels, and not from their direct application to the brain itself." (Essay, &c. p. 60.) And to this theory Dr. Christison has given the sanction of his approbation.

Messrs. Morgan and Addison have arrived at their conclusions, partly from certain assumptions and reasonings, and partly from experiment. They assume that such is the rapidity with which death takes place from some poisons, that the absorption of the poison is impossible; and hence, as it is absurd to suppose that nature employs two modes of effecting the same purpose in the animal economy, absorption never can be the direct medium of transmission; that the phenomena of sensation, and some of the morbid effects of mechanical injuries, analogous with the effects of some poisons, occur without the absorption and subsequent application of any material agent to the brain or other organs affected; and, finally, contending for a common medium through which all morbid agents produce their remote or general effects, they reject the notion that absorption supplies that medium, in the sense contended for by Brodie, Magendie, &c.

After an attentive consideration of their reasoning and facts, and a comparison of them with others already before the public, we do not hesitate to express our dissent from their hypothesis. Their analogical reasoning appears to us inconclusive, their experiments exceptionable, and the inferences deduced from them untenable, or liable to considerable doubts.

That absorption is the direct medium by which the influence of poisons is conveyed to the brain or other organs remotely affected, is the opinion which they have controverted. This opinion, in our judgment, is full as plausible as that now proposed by our authors; either of them, however, demands further experiments to confirm or refute it.

We beg to make, in this place, a few remarks on the phenomena of sensation, and on the sudden mortal effects of some mechanical injuries, in relation to the present subject.

Sensation, an ultimate fact in physiology, is a function performed by a special apparatus, that is, by the nerves of

special sense, and by the ramifications of the posterior branches of those which Mr. C. Bell has denominated double nerves; and, however it may be employed as an illustration, has but one analogy with the effects of poisons, namely, rapidity of transmission. Now, it is experimentally demonstrated of many poisons, that when they are applied either to the nerves of sensation or to those subservient to voluntary motion, their remote effects are not produced. Neither is the integrity of these nerves in a limb to which poison is applied at all requisite for the full and rapid production of its remote effects. Hence it appears that whatever analogy may be supposed to exist between the sensations and the effects of poisons, the medium through which their influence is transmitted is not the same: consequently, that there must be some apparatus connected with the brain and spinal marrow, &c. independent of the nerves of sensation and volition, through the medium of which the phenomena of poisoning may be sometimes excited with a rapidity *like* that of sensation.

We willingly concede to Messrs. Morgan and Addison, that the *medium* through which poisons, commonly so called, and many other (not all, however,) morbid agents, produce their remote or general effects is one and the same; and that no ground of distinction can be drawn as to the nature of morbid agents from the interval of time which elapses between the application of the cause and the production of its effect; and we, further, see no reason to controvert their position, that we find an *analogy* in the nature of the effect, as well as in the period of their occurrence between the sensible consequences of morbid agents and mechanical injuries, as in tetanus, and the sudden mortal effects of gunshot wounds, &c. But we think it is obvious that they have deceived themselves in confounding the operation of causes which operate through sensation\* or mental emotion (and exciting either morbid or fatal sympathies) with others which have no such source of operation, and that, in fact, they have too much limited their views into the causes of disease.

Absorption, then, being denied to be the medium through which the remote effects of poisons are produced, and nervous transmission its alleged medium, it remains to be asked to what part of the nervous system this function is attributed? We have seen that the nerves of sensation and

\* Vide Dr. Alison's paper on Sympathy in vol. ii. of Med.-Chirurg. Trans. of Edinburgh; and Travers on Constitutional Irritation.

volition are excluded, and the authors have not mentioned the sympathetic nerve and ganglionic system. We presume, however, that this must have been in their contemplation; and, if such was their opinion, it was susceptible of some illustration by direct experiment. We cannot, however, avoid expressing our expectation that the result of such experiments, if they had been instituted, would have been unfavorable to the views of Messrs. Morgan and Addison (Vide Milligan's *Magendie*, p. 97.)

In those slight or severe gunshot wounds and other mechanical injuries, from which sudden mortal effects are said to have occurred, without there being any perceptible sign of violence, it can never be satisfactorily proved that mortal faintness was not produced by mental emotion. Mental emotion is known to be capable of producing such effects; and it is probable that, when such cause is absent, these mortal effects are referrible to sudden and painful sensations. To tetanus from mechanical injury, as an illustration of the theory of Messrs. Morgan and Addison, we decidedly object. Authentic histories of tetanus, thus occasioned, do not mention its occurrence till after the lapse of some days, and what processes may have been going on during that time is unknown. It may hereafter turn out that this illustration is decidedly unfavorable to their mode of explanation.

Poisons, it appears, then, may produce their effects with a rapidity somewhat like the phenomena of sensation, and sensations may produce morbid phenomena in the general system like the effects of poisons; but sensations are transmitted by an apparatus through which the remote effects of poisons are not produced: neither is the integrity of sensation essential to the action of some poisons. Sensations and mental emotion can produce fatal effects; but if death from either commence, as is probable, in the cerebro-spinal system, indirectly affecting the heart, &c., the medium through which the former operate is familiar; and with regard to the latter, it may be safely affirmed to constitute no formidable opposition to the theory of *Magendie*, &c. The notion that the rapid effects of some poisons cannot, by possibility, be attributed to venous absorption, is obviously gratuitous; and no attempt has been made by Messrs. Morgan and Addison clearly to point out by what system of nerves they conceive them to be transmitted. Nevertheless, we are far from thinking that there has been any experimental demonstration of the theory that poisons are necessarily conveyed to the parts affected in their remote action; but there are some strong probabilities in its favor.

It is well ascertained, for example, that the blood is impregnated by the poison. It is known also that the rate of venous absorption influences the rapidity and degree of the effect of poisons; and so far as any direct experiments have been made to ascertain in how short a time poisons can traverse the system, the result is favorable to the theory of Magendie; and, finally, experiment demonstrates that the remote effects of poisons are produced independently of that system of nerves which has the closest connexion with the cerebro-spinal system. We proceed to give the proofs in support of these probabilities.

A case of poisoning by oxalic acid was communicated to Dr. Christison by Dr. Arrowsmith, which proved fatal in thirteen hours. Six hours after the poison was swallowed, some leeches were applied to the region of the stomach, and were almost immediately poisoned. "They were healthy," says Dr. Arrowsmith, "small, and fastened immediately. On looking at them in a few minutes, I remarked that they did not seem to fill, and, on touching one, it felt hard, and immediately fell off, motionless and dead. The others were all in the same state. They had all bitten, and the marks were conspicuous, but they had drawn scarcely any blood."\* This is an isolated fact, but it appears to be sufficiently well attested. Since Dr. Arrowsmith made this observation, M. Vernière has pointed out the extreme susceptibility of the medicinal leech to the effects of poisons.

After a *fatal* dose of extract of nux vomica had been thrust into the paw of a dog, M. Vernière applied a tight ligature around the limb; warm water was then very slowly injected into the jugular vein to as great an extent as the animal could safely bear, and the ligature was then removed. Half an hour was allowed to elapse, which in ordinary circumstances would have been much more than sufficient to enable the poison to act, but the animal remained totally unaffected. The ligature was next replaced, but so as to obstruct the venous circulation only just as in performing the operation of venesection; the principal vein of the limb was then opened immediately below the ligature, and the blood which flowed was collected. This blood, cautiously injected into the vein of another dog, caused violent tetanus and almost instant death. The inoculated dog remained unaffected. (*Journal des Progrès des Sciences*, tom. iii. 1827.)

The "vaunted" experiment of M. Magendie (as our authors term it) has unnecessarily encountered much of

\* Christison, p. 146.

their criticism. In this well-known experiment, M. Magendie separated the limb from all connexion with the body, except by the femoral artery and vein. He then divided them, and connected the divided ends by quills, so that the blood which returned from the limb necessarily passed through the quill, and the quill only. Poison introduced into the paw destroyed this animal as speedily as though no mutilation had taken place. M. Magendie considered this experiment to be a demonstration of venous absorption.

There are other experiments, however, of M. Magendie quite as worthy of our authors' attention. We beg to quote some of them, as they illustrate the above experiment of M. Vernière.

"After having injected almost two pints of water into the veins of a dog of ordinary size, I introduced into his pleura a small dose of a substance, with whose effects I was familiar. I was surprised to see the effects only take place several minutes after the period at which they usually show themselves.

"In another experiment wherein I had introduced as much water (about four pints) as the animal could support without ceasing to live, the effects did not show themselves at all. Absorption had probably been prevented. After waiting almost half an hour for effects which only require about two minutes to display themselves, I reasoned as follows: if the distention of the blood-vessels be, in this case, the cause of the absence of absorption, then, distention ceasing, absorption ought to take place. Immediately I took a large bleeding from the jugular vein of the animal submitted to experiment, and I perceived, with singular pleasure, the effects proceed to manifest themselves as the blood flowed.

"An animal was bled, and lost half a pound of blood: effects (that is, of a poisonous agent introduced into the pleura,) which should not have happened before the end of the second minute, showed themselves distinctly before the thirtieth second." (*Journal de Physiologie*, tom. i.)

Now, although it is plain that the preceding observation and experiments leave the question of the transmission of the effects of poisons by "the sensible structure of the blood-vessels" undetermined, they establish two facts, namely, that the blood is fully impregnated by the poison, and that the rapidity and the degree of effect of some poisons, if not of all, is regulated by the rate of absorption; and they pointedly refute the following assertion of Messrs.

Morgan and Addison, (p. 50,) that "M. Magendie has left the question relative to the *necessity for venous absorption* and cerebral contact, as connected with the operation of poisonous agents, in precisely the same state as he found it."

Mr. Brodie admitted (incautiously, we think,) that the rapid effects of some poisons could not be transmitted through the medium of absorption, which medium he had previously contended for where the effects were developed more slowly. Hence he assumed a double medium of communication with the brain in the operation of poisons. Our authors assume this probable mistake of Mr. Brodie (the rejection of absorption as the medium by which the most rapid effects of poisons are conveyed,) as an indisputable truth, and comment rather sharply upon the inconsistency of his philosophical creed. We agree with them in thinking that "it is contrary to all fair analogy to suppose that any variety observed in the effect of a local agent can essentially depend on the medium by which it is carried into the system;" and we think they would have no objection to add, that poisons, in a concentrated state, must act remotely through the same channel as the same poisons in a milder form, and hence that the more rapid effect produced by a concentrated poison is in itself no argument for any particular channel of communication; and, as in experiments where the effects are more slowly developed, the phenomena are more easily observed, the milder mode of producing such phenomena appears the most likely, we think, to enable us to detect this disputed channel.

This inference of Mr. Brodie, so eagerly seized on by his "opponents," is supported by no direct evidence. Dr. Christison has collected in his work facts to "show the shortest and longest intervals within which poisons begin to operate; and the shortest and longest period within which they prove fatal." But direct experiments to prove in how short a time poisons may traverse the different organs of the body have been very scantily supplied. The following, from Tiedemann's *Physiological Journal*, are interesting:

"The time," says Professor Hering, "which a solution of ferro-prussiate of potass, injected into the one jugular vein, requires to reach that of the opposite side was, in various experiments, from twenty to twenty-five or thirty seconds; to reach the external thoracic vein of the other side, from twenty-three to thirty seconds; the vena saphena major, twenty seconds; the masseter artery, from fifteen to thirty seconds; the opposite maxillary artery from ten to



fifteen seconds," &c. (*Zeitschrift für Physiologie*, band iii. s. 85.)

The concentrated state of poisons obviously augments the rapidity of their effects; and we may observe, *en passant*, that the substance experimented with by Professor Hering is but little poisonous. In addition to the state of concentration, we beg to suggest that the *physical properties* of a poison may also influence the rapidity of its effect. Prussic acid is the poison by which the most rapid effects have been produced. Now, prussic acid is very volatile; it boils at 80° F.; and is it unreasonable to suppose that, when exposed to the heat of the blood, as in dropping it into the jugular vein, its very volatile nature in the concentrated state may so facilitate its transmission by the blood to remote parts, so as to render it unnecessary to call in the aid of any other channel? In cold-blooded animals its effects are less sudden; and when the vessels of any part are tied before the part is touched with the prussic acid, its action is prevented; but the previous division of the nerves of a part has no such effect.

We are not aware that any more direct or conclusive evidence exists to prove that poisons are actually conveyed to the parts remotely affected; but we think the preceding facts and observations render such an opinion probable, and that they weaken the objections brought against it from the great rapidity of the remote action of some concentrated or gaseous poisons.

It remains for us to show in what particulars the experiments of Messrs. Morgan and Addison are open to objection, and their inferences doubtful; and we shall conclude with explaining, that if the result of their experiments had been the reverse of what they were, the objections advanced by those gentlemen to explain the fallacies of all preceding experiments are equally applicable to their own. Hence a true *experimentum crucis* is as yet a desideratum.

Messrs. Morgan and Addison relate two experiments to prove the susceptibility of the internal coats of the veins to poisons.

The circulation in the jugular vein of a dog was interrupted. The vein was divided, and afterwards connected by means of a brass cylinder containing some woorara. In forty-five seconds, all power over the voluntary muscles ceased; in two minutes, convulsions and respiration had entirely ceased. This result is altogether usual.

But, secondly, a dog of the same size had the circulation temporarily arrested in the jugular vein, and afterwards a

quill containing woorara was introduced within the vein, through a small opening; the impediment to the circulation *above* the quill was removed, so that the blood came in contact with the poison; the *lower* ligature was retained, so that the direct communication with the heart was interrupted. This animal dropped in convulsions in 108 seconds, and expired in three minutes and a quarter.

We are at a loss to conceive how these experiments can be supposed to prove an action through the nervous fibrils of the vein, rather than by the round of the circulation.

Further to show the instrumentality of the *sensible* structure of the blood-vessels, poison (woorara) was introduced into the carotid artery in two animals, and into the femoral artery of another: but although, say our authors, the poison was directly conveyed to the brain, the convulsions and death happened no earlier than in the previous experiments, when the poison was introduced into the veins. But on this experiment we would remark, that the period in which death is produced varies in different poisons, and what is the shortest time within which woorara proves fatal has not been particularly ascertained. It may turn out to be the time mentioned in these experiments.

But, to prove that the poison was not dissolved in the blood, (Essay, p. 84,) and thus conveyed to the brain, a connexion and circulation through the carotid of one dog with the carotid artery of another dog was established, so that the blood from the heart of one dog was conveyed to the brain of the other dog. The "poison of nux vomica" was then introduced into the back of the animal whose blood was transmitted to the brain of the opposite animal. The inoculated animal was affected in the usual manner, and so continued for fourteen minutes, during which period the circulation was maintained, but the other animal did not furnish the slightest indications of its influence. (P. 82.)

To this experiment we oppose the following considerations: The diameter of one carotid artery, in its healthy state, is little more than one fourth of the whole caliber of the vessels carrying blood directly to the brain: consequently, the dog not inoculated was subjected to the influence of one fourth only of the quantity of the poison which was conveyed to the *brain alone* of the inoculated animal. A great proportion of the poison absorbed and dissolved in the blood must, however, have been distributed by the blood to other parts also of the inoculated animal, and particularly (be it remarked) to the medulla spinalis. Now, so far as a satisfactory pathology of tetanus and tetanic

affections has been made out, it is highly probable that the seat of such pathologic state is in the medulla spinalis; and, from experiment, it seems no less probable that the action of strychnia is almost peculiar to the same part of the cerebro-spinal system. For proofs of these opinions we refer to the works of Ollivier, Abercrombie, of Bellingeri, C. Bell, and Magendie and Delille. It may be worth while, indeed, to quote two experiments performed by the two last-mentioned gentlemen, with the *Upas tieuté*, which Pelletier and Caventou inform us contains strychnia for its active principle.

After relating an experiment in which, the spinal marrow having been divided at the occiput, the tetanic convulsions followed the employment of the poison as usual, they performed the following: "Eight drops of upas, diluted with water, were injected into the pleura of a strong dog: at the same instant a piece of whalebone was forced down the whole length of the vertebral canal; the whole of the spinal marrow followed the whalebone when it was withdrawn from the vertebral canal. *Ten minutes* after the destruction of the spinal marrow, the circulation continued, and there was *no convulsion*."

"In another experiment, the same quantity of upas was injected into the cavity of the peritoneum of a dog: the moment the 'tetanus' manifested itself, a piece of whalebone was forced down the vertebral canal, commencing with the first cervical vertebra: the tetanus ceased in the fore paws when the whalebone reached the dorsal region; it continued, on the contrary, in the posterior extremities, which ceased to be convulsed when the piece of whalebone reached the caudal extremity of the vertebral canal." (Orfila, *Toxicologie générale*, ii. 369.)

Now, the preceding considerations, and the facts connected with them, serve to explain, first, how very different were the quantities of poison administered to the two dogs; and, secondly, how much more considerable was the quantity directed towards the spinal marrow in the inoculated dog than in the other. Nor is it altogether groundless to presume (from a remark which occurs in the following experiment,) that the connexion of the two arteries, by means of an inelastic tube, would retard the flow of blood in the uninoculated, and thus further diminish the quantity of the poison sent to the brain. The therapeutic experience of our authors must, of course, have convinced them that *nuxvomica* is not poisonous in every dose.

Previously the authors had not thought it worth while to

dispute (p. 79,) whether the poison does circulate with the blood; but, from this experiment, they appear to have concluded (how erroneously our readers must perceive) that it does not mingle with the blood.

An experiment, apparently more conclusive than the preceding, or indeed than a modification of it subsequently related in their work, is described at p. 85. In this experiment, the division and reconnexion of the jugular veins in each dog was effected in the manner formerly alluded to, "so that the venous blood from the head of one dog passed into the heart of the other. The animal contributing blood to the other was then inoculated on the side of the face with *nux vomica*, and in the usual time exhibited the usual symptoms: these continued without intermission during the space of *seven minutes* after the animal was first affected, the circulation being freely kept up through the artificially connected jugulars; at the end of this period, *the circulation was beginning to become impeded by the formation of a small coagulum in the tube.*" The uninoculated dog never showed the slightest symptoms of being poisoned.

It is a sufficient objection to this experiment, to say that the *whole* of the poison inserted into the face could not, under any such circumstances, be transmitted by one jugular vein; but we have evidence enough that the circulation, so far from having been freely kept up, was much impeded, for, in the short space of seven minutes, a coagulum had formed within the tube, which, if the experiment had been continued, would probably have arrested the circulation through the vein entirely. It is inconsistent to suppose there would have been any *tendency* to the formation of a coagulum, if the natural velocity of the circulation had been maintained; and we conceive there will be but little hesitation in admitting that, if *any* impediment exist to the free transmission of the blood in one quarter, it is immediately diverted to another. In this experiment, therefore, (certainly the best performed by our authors,) it is exceedingly uncertain what dose of the poison passed into the circulation of the uninoculated dog. M. Vernière's experiment demonstrates that the blood is poisoned by *nux vomica*, and hence we must infer that, in this experiment, the quantity conveyed by the jugular vein in this uninoculated dog was not a poisonous dose.

We think the warmest partizans of the theory of Messrs. Morgan and Addison will allow that the preceding facts and observations satisfactorily explain the inconclusiveness

of their reasonings and experiments; and that, if their theory be the true one, it must be proved to be so by further investigations; and we beg to ask, if the result in the two last experiments had been just the reverse of what it was, that is, if the uninoculated animals had been poisoned by the blood of the inoculated animals, whether it would not have been easy for them to say, "this is no proof against our theory: the poison came in contact with the 'nerves of the inner coat of the blood-vessel' (p. 79,) before it reached the brain, and in this way was its influence transmitted." Nor could that assertion be refuted. Hence their "vaunted" experiments do not offer to us an *experimentum crucis*.\*

Now, we venture to presume that the results of analogous experiments will be found the reverse of those which they have obtained. But the experiments must be modified. We beg to suggest that concentrated prussic acid, strychnia, &c. in large doses, be tried; and, as of course the inoculated animal will, under such circumstances, be speedily destroyed, respiration should be maintained artificially. If the blood be strongly impregnated with the poison, and circulate freely, we confidently anticipate that the uninoculated animal will experience its fatal influence. The theory of Messrs. Morgan and Addison will then repose on their inconclusive reasonings for its only support, and the probability of the views of Magendie, Barry, &c. will be increased. But an *experimentum crucis* will still be a desideratum.

It is scarcely necessary to add, that the treatment of poisoned wounds recommended by Dr. Barry remains entirely unaffected by the experiments and speculations of our authors; whilst we regret to say that their criticisms of Dr. Barry are not particularly candid. Indeed, the supercilious and oracular tone which pervades the essay is rather misplaced in a first attempt at physiological speculation.

With these remarks we conclude our notice of the essay of Messrs. Morgan and Addison, and proceed to consider Dr. Christison's chapter "on the Evidence of General Poisoning."

The investigation of the evidence of general poisoning is purely medico-legal. It comprehends an account of the various kinds of evidence by which the medical jurist is enabled to pronounce whether poisoning, in a general

\* We recommend to our authors' consideration the experiments of Magendie, on the vena porta, into which he injected substances of a poisonous nature. By what nervous fibrils is that vein supplied?

sense (that is, without reference to a particular poison,) is impossible, improbable, possible, probable, or certain. It likewise comprises an appreciation of the circumstances which usually lead the unprofessional, as well as the professional, to infer correctly or erroneously, a suspicion of such poisoning. (Christison, p. 30.)

The evidence by which the medical jurist is enabled to pronounce on the existence or non-existence of poisoning in general, and to determine the subordinate questions that relate to it, is derived from five sources: 1st, symptoms during life; 2, appearances in the dead body; 3, chemical analysis; 4, experiments and observations on animals; and, 5, certain moral circumstances, which are either inseparably interwoven with the medical proof, or cannot be accurately appreciated without medical knowledge.

*I. Of the evidence from symptoms.*

So lately as during the latter part of the 18th century, opinions were grounded almost exclusively on the symptoms. About that time the infallibility of such evidence began to be doubted, and it is now laid down by every esteemed writer on medical jurisprudence, that these symptoms, however exquisitely developed, can never justify an opinion in favor of more than high probability. Dr. Christison dissents in some measure from this doctrine; and in laying it down, medical jurists, he says, appear to him to have confounded actual symptoms with their general characteristics. He thinks this doctrine correct as far as regards the *general characteristics* merely of the symptoms, but, if applied to the actual symptoms produced by particular poisons, in all cases whatever of their action, it is liable to several exceptions. For example, if, after something has been taken which tasted acrid, and caused a sense of heat, pricking, or tightness in the throat, the characteristic signs of poisoning with the irritants make their appearance in the usual time, and are soon after accompanied or followed by true mercurial salivation, it may be safely inferred that some soluble compound of mercury has been taken. If, immediately after swallowing a liquid which causes a sense of burning in the throat, gullet, and stomach, violent vomiting ensues, particularly if the vomited matter is mixed with blood; if the mouth become white or yellow, and stripped of its lining membrane; and the cheeks, neck, and neighbouring parts show vesications, or white, or subsequently yellow or brown excoriated spots; if the clothes show red spots, and are disintegrated there, Dr. Christison thinks the inference in-

evitable that nitric or sulphuric acid has been taken; and he is supported in his notion of the sufficiency of such proof by Dr. Mertzdorff, late medical inspector of Berlin.

If a person, immediately after swallowing a solution of a crystalline salt, which tasted purely and strongly acid, is attacked with a sense of burning in the throat, and then in the stomach, and vomiting, particularly of bloody matter; imperceptible pulse and excessive languor; and dies in half an hour, or, still more, in twenty, fifteen, or ten minutes, Dr. C. knows of no fallacy which can interfere with the conclusion that oxalic acid was the cause of death. No parallel disease begins so abruptly and terminates so soon, and no other crystalline salt has the same effects. Should a person be taken several times ill with symptoms of general inflammation of the mucous membranes, and each time after partaking of a suspected article of food and drink, the proof of the administration of arsenic would be very strong indeed, and it would be unimpeachable if at length a nervous affection succeeded at the usual period. Or, above all, suppose several persons, who have partaken of the same dish, are seized about the same time with nearly the same symptoms of irritation of the mucous membranes, the proof of general poisoning would then be unequivocal.

To return from these exceptions. The chief characteristics usually ascribed to the symptoms of poisoning, considered generally, are, that they commence suddenly, and prove rapidly fatal; that they increase steadily; that they are uniform in nature throughout their course; that they begin soon after a meal,\* and that they appear while the person is in a state of perfect health. These are general facts, but all liable to exception. In instances of slow criminal poisoning, and of poisoning whilst a person is labouring under natural disease, they do not hold good. Cases of the latter description are generally very embarrassing; for if, instead of medicine, a poison be administered, the symptoms occasioned by which resemble the natural disease, suspicion may not arise till it is too late to collect evidence.

Now, although the characters common to the symptoms of general poisoning are by no means universally applicable, yet, considering the little knowledge possessed by the vulgar of the action of poisons, and, consequently, the rude nature of their attempts to commit murder by poisoning, the exceptions will not be numerous; and the chief characteristics will often enable the jurist to say that poi-

\* The negative evidence on this point is favorable to the person accused, and sometimes decisive against poisoning.

soning was possible, probable, or highly probable; which, when the moral evidence is very strong, may be quite enough to decide the case; and, although they can never enable him to say that poisoning was certain, they will sometimes entitle him to say, on the contrary, that it was impossible; and, when the chemical or moral evidence proves that poison was given, the characters of the symptoms may be necessary to determine whether it was the cause of death.

We think it will be convenient to continue, in this place, the symptomatology of the different classes of poisons, as contrasted with the symptoms of various natural diseases; although, in so doing, we depart widely from the arrangement of Professor Christison.

1. And first of the class of irritant poisons. Dr. Christison, after stating that inflammation of the whole alimentary canal, more or less, is the chief consequence of these poisons, adds that they are accompanied, in almost every instance, with great disturbance of the circulation, quick feeble pulse, excessive prostration of strength, coldness and clammy moisture of the skin; and sometimes symptoms of irritation and inflammation of the windpipe and lungs, and with those of irritation of the urinary organs.

The most important natural diseases whose symptoms have an analogy with the preceding, are distention and rupture of the stomach; rupture of the duodenum; effects of drinking cold water; bilious vomiting and cholera; acute gastritis; inflammation of the intestines; peritonitis; spontaneous perforation of the stomach; *melæna* and *hæmatemesis*; colic, iliac passion, and obstructed intestine. (Christison, 87; Orfila, *op. cit.* ii. 606.)

*a.* Death from distention of the stomach may take place either from superinduced apoplexy, &c. or from simple over-distention of the stomach, but a careful post-mortem examination removes all doubts. *b.* Rupture sometimes arises from over-distention, particularly when combined with efforts to vomit, for the cardiac aperture becomes valved, and the contents cannot be discharged by vomiting. Sometimes from distention by gases developed by depraved digestion; and sometimes there is a partial rupture, or laceration of the inner coat only. Rupture may occur without previous distention, and death is sometimes instantaneous. The symptoms of rupture from distention, and of ventricular perforation, are a sense of something giving way in the pit of the stomach, acute pain gradually extending over the whole abdomen, great tenderness and tension,



excessive prostration, &c. c. Ruptured duodenum is rare, and requires no particular notice. d. Drinking cold water when the body is heated sometimes produces sudden death, and not uncommonly instantaneous death. Sometimes it produces apoplexy, and in some instances cholera. Of all diseases, this last is, however, the most embarrassing, on account of its frequency and peculiar symptoms; and some cases of irritant poisoning, says Dr. Christison, cannot be certainly distinguished by their symptoms from cholera, but in some others, where the physician has been able to ascertain the symptoms in detail, the distinction may be drawn. The sense of acridity or burning in the throat never begins in cholera before vomiting; in poisoning, it sometimes does: and Dr. Christison says, that no case is recorded where the vomiting in cholera was bloody. And, lastly, cholera in this country is not very often fatal, and, when it is so, death very rarely takes place within three days. Two or three instances are, indeed, recorded of death within twelve hours from cholera in this country; and it should be observed, that cholera generally prevails at a particular season of the year, and in an epidemic form. f. Acute gastritis. Dr. Abercrombie has said that he has never seen a case of acute idiopathic gastritis, nor have Dr. Christison's inquiries discovered more than one or two *probable* cases of that description. In this disease, as in cholera, it is important to observe that the sense of burning, if present at all, does not precede vomiting. g, h. Should enteritis or peritonitis present some analogies with the symptoms of irritant poisons, they are readily distinguished by post-mortem examination. i. Spontaneous perforations of the stomach are sometimes accompanied both with symptoms and post-mortem appearances resembling the effects of irritant poisons. This subject is rather obscure, and is highly deserving of further investigation. Spontaneous perforation is of three kinds. One is the last stage of some varieties of scirrhus. This kind of perforation is generally fatal within twenty-four hours. The previous disease is not always indicated by pathognomonic signs. The second variety of perforation takes place by simple ulceration, without previous scirrhus. The third variety is much more singular, and is the result of *ramollissement*. It is not necessarily accompanied by vascularity; the symptoms are very obscure. In addition to the authors mentioned by Dr. Christison and others, some observations on this subject are to be found in the third volume of the Transactions of the Austrian Physicians, by Professor Lenhossek, who,

we believe, anticipated the views of Dr. Gairdner; and also in the work of M. Billard on the Diseases of Infants. By Hunter, Allan, Burns, and other British pathologists, this state has been attributed to the solvent power of the gastric juice, and in some instances correctly, but certainly not in all. We refer to the thesis of Laisné, the observations of Dr. Gairdner, Lenhossek,\* and Billard,† for illustrations. *k.* Perforations of the gullet and intestines have not been observed as the results of poisoning. *l, m.* Melæna and hæmatemesis it is scarcely possible to mistake for effects of poisoning, as the pain which accompanies them is seldom acute, and the discharge of blood is generally profuse. *n.* Colic, iliac passion, and obstructed intestine. The abdominal symptoms alone do not seem to distinguish these natural diseases from the effects of poisons: but, in severe cases of poisoning, collateral symptoms will almost always furnish a ground of distinction. The symptoms of these affections are well known. Dr. Christison says he is not aware that stercoraceous vomiting is ever occasioned by poisoning. In colic from mechanical obstruction, the seat where the pain commences, and the obstinate constipation, form grounds of distinction.

2. Of the symptoms of the narcotic class of poisons compared with the symptoms of natural disease.

The symptoms of the narcotic poisons in man, and in the higher order of animals, are giddiness, headach, obscurity or deprivation of sight, stupor or perfect insensibility, palsy of the voluntary muscles, or convulsions of various kinds, and, towards the close, complete coma; and the most important diseases whose symptoms may be confounded with the preceding are apoplexy, epilepsy, inflammation of the brain, hypertrophy of the brain, inflammation of the spinal cord, and syncopal asphyxia.

*a.* Apoplexy has often precursory symptoms. M. Rochoux has said, however, that, of sixty-three cases which came under his notice, nine only had distinct precursory symptoms. It attacks chiefly those advanced in life, although that is not without numerous exceptions. It occurs chiefly amongst the corpulent, and sometimes during a meal, or immediately after. The symptoms generally commence abruptly. In the sopor of apoplexy, it is scarcely possible to rouse the patient to consciousness. Apoplexy, although

\* Beobachtungen und Abhandlungen von österreichischen Aerzten, 3er band. Wien, 1823.

† Traité des Maladies des Enfants, &c. 8vo. Paris, 1828.

it is sometimes rapidly fatal, for instance within an hour, very often lasts a whole day, or even longer.

b. Epilepsy, distinguished by convulsions and abolition of sense, is generally a chronic disease, and has sometimes precursory symptoms. The fit begins violently and abruptly. The patient cannot, in general, be roused by external stimuli. In fatal epilepsy, the paroxysm generally lasts long, sometimes more than a day. Epilepsy is scarcely ever fatal in the first paroxysm.

c. The diseases of the spinal cord which, producing convulsions, delirium, and coma, may be confounded with narcotic poisoning, are extravasation of blood into the spinal cord; inflammation of the membranes; and inflammation and ramollissement of the cord itself. These diseases are not very probable sources of fallacy, but they serve to show the necessity of examining the spinal cord and its membranes in all judicial cases of alleged narcotic poisoning, especially where death has not been rapid. On comparing the effects of poisons with these diseases, we observe, generally, that poisoning with the narcotics has not of course any precursory symptoms, except by fortuitous concurrence. It has happened most frequently amongst the young, especially of the female sex; and the person may not have been corpulent or disposed to the diseases above alluded to. The effects of the common narcotics, when they prove fatal, begin not later than an hour, or at the utmost two hours, after they are taken: most frequently they begin in fifteen or thirty minutes. Hence, if it can be proved that the nervous symptoms under which a person died did not begin till several hours after he took food, drink, or medicine, it appears almost, if not absolutely, certain that a narcotic poison cannot have been the cause of death. There are some exceptions to this, but the rule will hold generally. With respect to the commonest of the narcotic poisons, opium, the symptoms never occur till after the interval of ten, twenty, or thirty minutes; and the deleterious gases, and hydrocyanic acid and its compounds, are the only poisons which act more instantaneously. Except with these latter, the sopor from poisoning is at first imperfect, and increases gradually, though sometimes very rapidly. In the sopor of apoplexy, it is possible to rouse the patient to consciousness; but, on the other hand, with some narcotics, and particularly with opium, the person may be roused from the deepest lethargy, if he be spoken to in a loud voice, or forcibly shaken, or if water be injected into the ear. Few people die of pure narcotic poisoning

who outlive twelve hours, and the greater number die much sooner, in eight or six hours. On the other hand, the narcotic poisons rarely prove so rapidly fatal as apoplexy sometimes does. Apoplexy decidedly may occasion death in considerably less than an hour. The narcotic gases and prussic acid are the only narcotics which prove so rapidly fatal. The shortest known period in which death has been occasioned by opium is three hours.

In relation to epilepsy, it may be observed that, if we except some cases of poisoning with hydrocyanic acid and the narcotic gases, the effects of narcotic poisons are gradual, although their progress toward their extreme of violence is often rapid. In abrupt cases of poisoning with hydrocyanic acid, the poison, under certain conditions, will be found in the body; while, in sudden poisoning with the narcotic gases, the nature of the accident is rendered obvious to a cautious inquirer by the collateral circumstances. The variety of poisoning with which epilepsy is most apt to be confounded, that is, with hydrocyanic acid, has hitherto always proved fatal within half an hour after the symptoms begin, unless the dose has been small, and given repeatedly.

3. Of the symptoms of the narcotico-acrid class, as compared with the signs of natural disease.

The poisons of this class are all derived from the vegetable kingdom. They have a double action; the one local and irritating, the other remote, and consisting of an impression on the nervous system. In large doses, their narcotic effects are most conspicuous; in small doses, their irritant action. Their most conspicuous effect is injury of the nervous functions, and the symptoms are so analogous to those from narcotic poisons as not to require any distinct specification. They seldom prove fatal if the case last above twelve hours, that is, by their narcotic action. The poisonous fungi and digitalis are, however, exceptions to this remark.

## *II. Of the Evidence from morbid Appearances.*

The appearances after death which are really morbid, and which may be produced by poisons, are, from one great class, the signs of inflammation of the alimentary canal in its progressive stages; in another class, the signs of congestion within the head; and in the third, a combination of the effects of the two foregoing classes. But these appearances are not invariably occasioned by the poisons which usually cause them, and most of them are exactly similar to those

left by many natural diseases. In general, therefore, the morbid appearances alone can never distinguish death by poison from the effects of natural disease.

Unusual lividity and early putrefaction were formerly much relied on as proofs of poisoning, but they are alike unfounded, and do not even justify suspicion. Arsenic, indeed, appears to have the power of preventing putrefaction under certain circumstances. In connexion with the symptoms and the general evidence, the appearance after death, by pointing out the nature of the previous illness, may furnish decisive evidence when the moral proof is strong; and, again, in cases of alleged *imputation of poisoning*, they are necessary to determine whether a poison actually found in the body was introduced during life or after death.\* And, in cases where no doubt can be entertained that poison was taken, the evidence from morbid appearance may be necessary or useful for settling whether or not it was the cause of death. When signs of the action of poison are not found in the dead body, and, on the contrary, the effects of the operation of natural disease are discovered, the presumption is that the person died a natural death. But even here caution is necessary, and a positive opinion, in the absence of a *history of the symptoms*, occasionally impossible, for poisons sometimes leave no signs of their action; and, on the other hand, a pathologic state, which in one person has caused death, may have existed in another without producing fatal or very evident consequences. An inspector should not, therefore, so frame his reports as to exclude the possibility of a different cause from the apparent one, unless the appearances are such as must have been necessarily a cause of death.

1. Of the morbid appearances caused by the irritant poisons, compared with those of certain natural diseases.

The effects of the irritant poisons on the alimentary canal are those of inflammation and its consequences, from the slightest to the severest degree, the gullet participating occasionally in its severest consequences. Simple redness of the stomach, &c. is liable to the greatest doubts, and should never be regarded as an effect of inflammation, in the absence of some more advanced or decisive proof of inflammatory action. The most instructive information on this head has been furnished by Dr. Yelloly† and M. Billard.‡ Dr. Christison has pointed out an appearance of

\* Orfila, *Toxicologie générale*, ii. 681.

† London Med. Chir. Trans. iv. 371.

‡ *Dela Membrane Muqueuse Gastro-intestinale*, 1825.

the mucous membrane of the stomach, resembling melanosis, as an indication of inflammation. We must refer to his work (p. 104) for the description which, we presume, will need further illustration. We have already said that Dr. Christison's inquiries render it probable that idiopathic *acute gastritis* is a very uncommon disease in this country. Reticulated lymph, adhering to the villous coat, and accompanied with corresponding reticulated redness of that coat, such as is seen in animals poisoned with arsenic or oxalic acid, is an unequivocal sign of inflammation. (P. 106.)

Ulceration and perforation are alike signs of natural disease and of poisoning. The co-existence of scirrhus furnishes a ground of distinction. The perforation from simple gelatinization of the coats, without proper inflammatory action, is the most puzzling and remarkable variety of perforation. Its most frequent situation is in the posterior surface of the stomach. It is sometimes small, and appears as if it had been made with a punch, but may be so large as to involve an entire half of the stomach, and sometimes there is more than one aperture. The margin is of all shapes, frequently fringed, and almost always formed of the peritoneum; the other coats being more extensively dissolved. But sometimes the peritoneal tunic of the stomach is most dissolved, intimating perhaps that, in these instances, the softening commences on the exterior coat. The organs in contact with the hole are frequently excavated or perforated. The pulp never smells of gangrene, nor does the edge of the whole in the stomach ever adhere to the adjoining organ.

The circumstances under which this extraordinary appearance occurs, are singularly various. Prof. Chaussier, and other French pathologists, conceive it to be always a morbid process; and without doubt it frequently is so. But it has been often discovered where the cause of death was quite obvious, and no suspicion could be entertained of disease of the stomach;\* as, for example, in sudden deaths from convulsions after delivery; after death from suppura-

\* Dr Ebermaier, who has recorded several very interesting cases of perforation of the stomach, states that "in no instance was the nature of the malady suspected by the physicians. In some the symptoms were so obscure, that an affection of the stomach was never thought of. The fatal termination of the disease was never anticipated. Death sometimes occurred unexpectedly, almost in the midst of apparent health." (London Med. and Phys. Journ. 1828, pp. 302, 422.) Upon this important subject, much interesting information will be found in the Dict. des Sc. Med. t. xlv. p. 514, art. *Perforation*, illustrated by plates.

tion of the brain, the result of violence; or in sudden death from fracture of the skull; or from hanging, and where no previous sign, referrible to disease of the stomach, had existed. The opinion of Hunter, supported by Allan Burns, remains unrefuted, we think, by the observations of the French pathologists.\*

Now, in perforations produced by the irritant poisons, the margin is commonly of a peculiar colour: for example, yellow from nitric acid, brown from sulphuric or the muriatic acids, orange from iodine. But, says Dr. Christison, an infallible criterion, and one of universal application, is the following: Either the person dies very soon after the poison is introduced, in which case vital action may not be excited in the stomach; or he lives long enough for the ordinary consequences of violent irritation to ensue. In the former case, part of the poison will be found in the stomach; in the latter, the deep vascularity, or black extravasation, around the hole, and in other parts of the stomach, will at once distinguish the appearance from a spontaneous perforation. Spontaneous erosion is very generally combined with unusual whiteness of the stomach, and there is never any material vascularity. (See trial of Angus for the murder of Margaret Burns, 1808, for an illustrative example.)

2. On the morbid appearances left in the body by the narcotic poisons, contrasted with the effects of natural disease.

The morbid appearances which the narcotic poisons leave in the dead body are commonly insignificant, and, slight as they are, are not by any means invariably found. Congestion, extravasation, and the simple apoplexy of Dr. Abercrombie,† are alike the consequences of natural disease and narcotic poisoning; for, with respect to the latter, Dr. Christison says, "it might even be a fair subject of inquiry whether death from some narcotic poisons at least, such as opium, is any thing else than death from simple apoplexy." (P. 499.) Opium, however, has produced ex-

\* Mr. Paxton, however, observes, "We have been in the habit of examining a great number of animals at different periods after death, and most of them carnivorous, whose gastric secretion is more active than that of the human stomach in dissolving animal matter; yet in these we never could find any erosion of the coats of the stomach, which must have been the case if it were possible for the gastric juice to have such effects. We consider the stomach, therefore, to be equally insensible to its presence in life or in death." (Paley's Natural Theology, illustrated by Plates and explanatory Notes, by James Paxton.)

† See p. 216 of his work on the Brain, &c. second edition.

travasation of blood; and congestion is not an unusual consequence of poisoning by it. (P. 541.) There is reason to believe that, in some cases of poisoning by opium, putrefaction takes place speedily.

After poisoning by hydrocyanic acid, the eye is said to retain a glistening and staring appearance, as during life. Such has been observed in several instances; and such is also the case after death from carbonic acid gas. Dr. Christison remarked the same fact very distinctly six hours after death, in a woman who died of cholera; and it has been noticed in cases of death taking place during the epileptic paroxysm.

The odour of prussic acid is oftentimes exhaled by the blood, but not always; and it is sometimes perceptible in the blood, even when it is not so in the stomach. Schubarth states as the result of his researches (Christison, 568,) that, if the dose is sufficient to cause death within ten minutes, the peculiar odour will always be remarked in the blood of the heart, lungs, and great vessels, provided the body have not been exposed to rain or to a current of air, and the examination be made within a moderate interval, twenty-four hours, for instance: but if the dose has been so small that life is prolonged for fifteen, twenty-seven, or thirty-two minutes, then, even immediately after death, it may be impossible to remark any of the peculiar odour, evidently because the acid is rapidly discharged by the lungs: and, even when the dose is large enough to cause death in four minutes, the smell may not be perceived, if the body have been left in a spacious apartment for two days, or exposed to rain for a few hours only.

### III. *On the Evidence of Poisoning from chemical Analysis.*

The chemical evidence, in charges of poisoning, is generally, and with justice, considered as the most decisive of all the branches of proof. It is accounted most valid when it detects the poison in the stomach, intestines, or gullet; then in the matter vomited; next in articles of food, drink, or medicine, of which the sufferer has partaken; and, lastly, in any articles found in the prisoner's possession, and for which he cannot account satisfactorily.

In two circumstances, however, some corroboration is necessary. In *imputation of poisoning*, it should be determined, by an accurate account of the symptoms, or by the morbid appearances, whether poison was introduced into the body before or after death;\* and, granting that it was

\* Vide Orfila, *Toxicologie générale*, ii. 681.



taken during life, whether it was the cause of death. Dr. Christison quotes the two following cases from German works, in illustration of the necessity of the latter inquiry.

A girl was severely chastised by her father, and died whilst the chastisement was being inflicted, and, as was supposed by the father and others, from its effects. The bruises were severe, but it appeared to Wildberg, inadequate to cause death. He therefore examined the cavities, and found the stomach very much inflamed, and lined with a white powder, which proved to be arsenic. It turned out that, on the theft, which the girl had committed, being detected, she swallowed arsenic, for fear of her father's anger; that she vomited during the flogging, and died in slight convulsions.

The other case occurred to Pyl, in 1783. A woman at Berlin, who lived on bad terms with her husband, went to bed in perfect health, but soon afterwards her mother found her breathing very hard, and discovered a wound on the left side of the breast. A surgeon being immediately sent for, the hemorrhage, which had never been great, was checked without difficulty; but she died towards morning. On opening the chest, the wound was found to penetrate the pericardium, but did not reach the heart; and, although the fifth intercostal artery had been divided, scarcely any blood was effused into the chest. Coupling these circumstances with the trifling hemorrhage during life, and the fact that she had much vomiting and some convulsions immediately before death, Pyl satisfied himself that she had not died of the wound; and the signs of corrosion in the mouth and throat, and of irritation of the stomach, with the discovery of the remains of some nitric acid in a glass in her room, proved that she had died of poison. (P. 49.)

But, if poison be not detected in the body, the experimenter being skilful, and the poison of a kind easily to be discovered, still it must not be concluded, from that fact alone, that poison has not been the cause of death; for it may have been all discharged by vomiting and purging, or it may have been all absorbed or decomposed.

1. It may have been discharged by vomiting or purging. The case of a grocer is quoted in the New York Med. and Phil. Journal, vol. iii., who died eight hours after swallowing an ounce of arsenic, and in whose body none could be found by chemical analysis. It is singular, however, how ineffectual vomiting sometimes proves in expelling some poisons from the stomach; for, after two days incessant vomiting, grains of arsenic have been found in the gullet of

a person who survived the taking of the poison four days although none could be found in other parts.

2. The poison may have disappeared because it has been absorbed. In a case in which the moral circumstances left no doubt that laudanum had been swallowed seven or eight hours before death, none could be detected by Dr. Christison; and M. Desruelles has related the instance of a soldier, who died in six hours and a half after swallowing two drachms of solid opium, and in whose stomach nothing was found but a yellowish fluid, quite destitute of the smell of the drug.

3. Poisons may not be found because the excess has been decomposed. This is particularly the case with vegetable and animal poisons, which may be altogether destroyed by the process of digestion. Some mineral poisons, such as corrosive sublimate, lunar caustic, hydrochlorate of tin, are also decomposed in the stomach; but they are not removed beyond the reach of chemical analysis, for the basis of the poison may be found in the solid contents of the stomach, under some other compound form.

The decay of the body may render it impossible to detect some poisons; but, on the other hand, it appears that arsenic, under certain circumstances, has a preservative power. That poison has been detected fourteen months after interment.\* (P. 261.)

#### *IV. Evidence of Poisoning from Experiments on Animals.*

Evidence from experiments on animals with articles supposed to contain poison, is more equivocal than was once imagined. The matter subjected to trial may be either suspected food, drink, or medicine, or it may be the stuff vomited during life, or found in the stomach after death.

1. The evidence derived from the effects of the suspected food, drink, or medicine, is better than that drawn from the effects of the vomited matter, or the contents of the stomach. But it should not be forgotten that what is poison to man is not always poison to the lower animals, and that, on the other hand, some of the lower animals are poisoned by substances not hurtful to man. According to the experience of Orfila, the cat and dog, but particularly the latter, are affected by almost all poisons exactly as man is. Alcohol, however, acts more powerfully on them than on man. It has been fully ascertained that arsenic, copper,

\* A case has recently been published in *La Lancette Francaise*, which was communicated to the *Académie Royale de Médecine* by M. Orfila, in which arsenic was detected in a body *seven years* after burial.

mercury, the mineral acids, opium, strychnia, veratrum album, prussic acid, cyanogen gas, sulphuretted hydrogen, and many others, produce nearly the same effects on man, quadrupeds, birds, amphibious animals, and even on fishes and on insects. Hence there are cases in which the evidence from experiments on animals with suspected articles of food, is unequivocal. In the case of Mary Bateman, who, after cheating a poor family for a series of years, at last tried to avoid detection by poisoning them, it was justly accounted good evidence that a portion of the pudding and the honey supposed to have been poisoned caused violent vomiting in a cat, killed three fowls, and proved fatal to a dog in four days, under symptoms of irritation of the stomach, such as were observed in the people who died. But in such a case a moderately skilful chemist could scarcely fail to detect the poison.

2. In the case of the matters vomited, or the contents of the stomach, there are weightier objections to experiments on animals: for the poison which has caused death may have been partly or wholly vomited beforehand, or absorbed, or transmitted into the intestines, or decomposed by the process of digestion; or, though abounding in the matters vomited, or in that which remains in the stomach, it may be so much diluted as not to have any effect on an animal; or the animal fluids secreted during disease are believed to act occasionally as poisons.

The last objection is a very important one, but, in Dr. Christison's opinion, it has been a good deal exaggerated. He refers to the repeated and fatal experience of anatomists, together with the precise experiments of MM. Gaspard and Magendie for proofs of the poisonous effects of the animal fluids under disease; and he quotes also the isolated case related by Morgagni, of a child who died of tertian ague and in the midst of convulsions, in whose stomach was found an æruginous bile so deleterious that a little of it given with bread to a cock caused convulsions and death in a few minutes, and a scalpel stained with it, when thrust into the flesh of two pigeons, killed them in the same manner. On the whole it appears that, in the present state of our knowledge, experiments or accidental observations on the effects of the contents of the stomach or matters vomited on animals are equivocal in their import. At the same time it must be observed, that the effects of some poisons on man may be developed so characteristically on animals by the contents of the stomach, as to supply very pointed evidence: for instance, in the case of a girl who was

proved to have died of accidental poisoning with laudanum, the inspector evaporated the contents of the stomach to dryness, made an alcoholic extract from the residue, and giving this to several dogs, chickens, and frogs, found that they were all made lethargic by it, and that a few died comatose.

*V. On the moral Evidence in Cases of Poisoning.*

The observations of Dr. Christison on the moral proofs of poisoning are novel and important, but we have not space even to abridge them, and must content ourselves with a mere enumeration of the chief circumstances of which he takes cognizance.

1. Suspicious conduct on the part of the prisoner before the event; such as dabbling with poisons, when he has nothing to do with them in the way of his profession; conversing about them, or otherwise showing a knowledge of their properties not usual in his sphere of life.

2. The purchase or possession of poison recently before the date of the alleged crime, and the procuring under false pretences, such as for poisoning rats, when there are none on his premises to poison, or for purposes to which it is never applied.

3. The administration of poison, either in food, drink, or medicine, or otherwise.

4. The intent of the prisoner; such as the impossibility of his having administered the poison ignorantly, or by accident, or for beneficial purposes alleged or not alleged.

5. The fact of other members of the family besides the deceased having been similarly and simultaneously affected.

6. Suspicious conduct on the part of the prisoner during the illness of the person poisoned; such as directly or indirectly preventing medical assistance being procured, or the relations of the dying person being sent for, or showing an over-anxiety not to leave him alone with any other person, or attempting to remove or destroy articles of food or drink, or vomited matter which may have contained poison, or expressing a foreknowledge of the probability of speedy death.

7. Suspicious conduct after the person's death; such as hastening the funeral, preventing or impeding the inspection of the body, giving a false account of the previous illness, showing an acquaintance with the real or supposed effects of poison in the dead body.

8. The personal circumstances and state of mind of the deceased, his deathbed declaration, and other particulars.

especially such as tend to prove the impossibility or improbability of suicide.

9. The existence of a motive or inducement on the part of the prisoner; such as his having a personal quarrel with the deceased, or a hatred of him, his succeeding to property by his death, or being relieved of a burden by it; his knowing that the deceased was with child by him, &c. (P. 61.)

We have thus presented to our readers an outline of the most important of the *general* subjects discussed in the work of Professor Christison. The opinion delivered by him, in opposition to almost all continental authorities, that the symptoms alone, in certain cases of poisoning, are capable of supplying decisive proof of the fact, is very important, and we think well sustained by some parts of the preceding abstract. The French, Germans, and others, have regarded this species of proof too much like men of abstract science, and with too little of common sense: for, granting that certain effects known to be the common results of certain poisons may, by remote possibility, be occasioned by natural disease, yet, if men engaged in extensive practice, and after the most diligent literary research, cannot, from their own experience, affirm, neither ascertain, that such effects have ever happened in more than one or two *doubtful* instances, this remote possibility ought surely, in strict propriety, to have but the very slightest influence over our conclusions. We are aware that solemn consequences attend our decisions, and hence, in forming them, extremely cautious investigation and unbiassed judgment should ever be exercised; but, under their guidance, if, in certain cases, we did not ascribe certain symptoms to the agency of poison, we must depart from all our usual methods of reasoning.

We designed to select a few of the subsequent chapters for abstract and remark, in order to afford our readers some notions of the manner in which Dr. Christison has treated of the individual poisons; but our limits forbid, at present, at least, the execution of our intention: and this we scarcely regret, as any condensed view offered by us could not supersede the advantage, and indeed necessity, of consulting the original work. The *treatment* pointed out in the various chapters on the individual poisons, renders the work valuable to the general practitioner; while to the medical jurist, from the novelty, accuracy, and practical bearing of the facts so copiously collected, it is indispensable. In short, it is, beyond comparison, the most valuable practical treatise on Toxicology extant.

*Researches principally relative to the Morbid and Curative Effects of Loss of Blood.* By MARSHALL HALL, M.D. F.R.S. E. &c. &c.—8vo. pp. 303. Seely and Burnside, London, 1830.

OF the many contributions to medical science for which we are indebted to Dr. MARSHALL HALL, none is more important than that which relates to the subject of the volume before us. In 1820 he published, in his *Medical Essays*, a brief sketch of some effects of loss of blood, and on exhaustion and sinking from various causes. Since that period his zeal has not abated, and he now submits to the profession a more elaborate and perfect exposition of those views and doctrines which he had before but briefly described.

The principal object of the present work is to apprise the inexperienced of some unexpected phenomena arising from loss of blood, of the remarkable difference in the degree of tolerance or intolerance of loss of blood in different diseases, of the equal danger of an inefficient and undue use of the lancet, and of a rule which may be adopted to obviate this danger. Another object has been to establish, "beyond the reach of controversy," a distinction between two classes of morbid affections, that of inflammations and that of irritations. Dr. Hall has very judiciously illustrated the general principles he has laid down by cases furnished by friends, and by the testimony of various highly respectable authors.

The work is divided into two parts; the first treating of the *morbid*, the second of the *curative* effects of loss of blood. The morbid effects of loss of blood are further divided into the *more immediate*, including syncope, convulsion, delirium, coma, sudden dissolution; and the *more remote* or exhaustive, with excessive reaction, with defective reaction, sinking, delirium, coma, and lastly with amaurosis. The effects of further loss of blood in cases of exhaustion, are next stated. They consist in the substitution of syncope for reaction, or in sinking or more sudden dissolution. The influence of various circumstances on the effects of loss of blood, as the strength, age, constitution, &c. of the patient, but especially of various diseases, is briefly commented upon in the fifth chapter. The chief effects of loss of blood on the *internal organs* are effusion and congestion in the brain, œdema of the lungs, effusion into the serous and cellular membranes, a deranged and tympanitic state of the alimentary canal. The last chapter of the first part contains the *treatment* of the effects of loss of blood.

It will be apparent from this rapid enumeration of the subjects of the first part of the work, that a new, interesting, and to a great extent unexplored, field of investigation is entered into. That Dr. Hall has very skilfully laboured in it, will be evident to our readers from the extracts we shall give. By due attention to the following very important statement, many fatal mistakes in practice may be avoided. We could cite many cases which have fallen under our own observation, in which the lancet has been employed to overcome the very symptoms the previously too free use of the lancet had occasioned.

"Some of the more obvious and striking effects of loss of blood, or those of reaction, are such as to suggest the idea of increased power and energy of the system, and of increased action in some of its organs, and to lead to an erroneous and dangerous employment or repetition of the lancet, when a directly opposite mode of treatment is required; while the state of actual but protracted sinking frequently resembles a state of oppression of the brain, or of congestion of the lungs, so accurately, as to prompt the unwary practitioner to a still more suddenly fatal use of the lancet.

"The result of this treatment is in itself again apt further to mislead us; for all the previous symptoms are promptly and completely relieved; and this relief, in its turn, again suggests the renewed use of the lancet. In this manner the last bloodletting may prove suddenly and unexpectedly fatal." (P. 5, 6.)

Proceeding in the order we have mentioned, Dr. Hall first describes the state of syncope through its more transitory, its more fearful, and its fatal forms. Convulsions are next treated of. From the phenomena attending the occurrence of convulsions, it is clearly denoted that the brain may be *similarly* affected in *opposite* states of the general system. Dr. Hall regards convulsion, when it arises from bloodletting, as a proof that the remedy has been carried too far. Delirium occurs as an *immediate*, as mania occurs as a more *remote*, effect of loss of blood. Several instances of the occurrence of delirium from exhaustion are detailed. Coma sometimes occurs as an *immediate*, but more frequently as a more *remote*, effect of loss of blood. Nothing can afford a more striking example of the necessity for the salutary warning which the author has given against mistaking cases of *reaction* for those of real power, than an instance he relates of the fatal effects of bloodletting during the former state. It should be read and re-read by the student, until every circumstance of it is indelibly imprinted upon his memory.

We proceed to the more remote effects of loss of blood, and first of exhaustion with *reaction*. The recovery from ordinary syncope is generally a simple return to a healthy state of the functions, or nearly so. After profuse loss of blood, the recovery is not quite so uniform; but in case the person be subjected to repeated bloodlettings, or to a continued drain,

“The pulse, instead of being slow and feeble, acquires a morbid frequency and a throbbing beat, and there are, in some instances, all the symptoms of excessive reaction.

“This state of excessive reaction is formed gradually, and consists, at first, in forcible beating of the pulse, of the carotids, and of the heart, accompanied by a sense of throbbing in the head, of palpitation of the heart, and eventually, perhaps, of beating or throbbing in the scrobiculus cordis, and in the course of the aorta. This state of reaction is augmented occasionally by a turbulent dream, mental agitation, or bodily exertion; at other times it is modified by a temporary faintness or syncope. There is also sometimes irregularity of the beat of the heart and of the pulse.

“In the more exquisite cases of excessive reaction, the symptoms are still more strongly marked, and demand a fuller description.

“The beating of the temples is at length accompanied by a throbbing pain of the head, and the energies and sensibilities of the brain are morbidly augmented; sometimes there is intolerance of light, but still more frequently intolerance of noise and of disturbance of any kind, requiring stillness to be strictly enjoined, the knockers to be tied, and straw to be strewed along the pavement; the sleep is agitated and disturbed by fearful dreams, and the patient is liable to awake or be awoke in a state of great hurry of mind, sometimes almost approaching to delirium; sometimes there is slight delirium, and occasionally even continued delirium; more frequently there are great noises in the head, as of singing, of crackers, of a storm, or of a cataract; in some instances there are flashes of light; sometimes there is a sense of great pressure or tightness in one part or round the head, as if the skull were pressed by an iron nail or bound by an iron hoop.

“The action of the heart and arteries is morbidly increased, and there are great palpitation, and visible throbbings of the carotids, and sometimes even of the abdominal aorta, augmented to a still greater degree by every cause of hurry of mind or exertion of the body, by sudden noises or hurried dreams or wakings. The patient is often greatly alarmed, and impressed with the feeling of approaching dissolution; the state of palpitation and throbbing are apt to be changed, at different times, to a feeling of syncope; the effect of sleep is in some instances very extraordinary, sometimes palpitation, at other times a degree of syncope, or an overwhelming feeling of dissolution; the pulse varies from 100 to 120



or 130, and is attended with a forcible jerk or bounding of the artery.

"The respiration is apt to be frequent and hurried, and attended with alternate panting and sighing; the movement of expiration is sometimes obviously and singularly blended with a movement communicated by the beat of the heart; the patient requires the smelling bottle, the fan, and the fresh air.

"The skin is sometimes hot; and there are frequently general hurry and restlessness.

"In this state of exhaustion, sudden dissolution has sometimes been the immediate consequence of muscular effort on the part of the patient, or of his being too suddenly raised from the recumbent into the erect position." (P. 29.)

It will be seen that the term "exhaustion with sinking" is not used to denote a state of negative weakness, but of positive and progressive failure of the vital powers. This state is altogether peculiar, and we believe it remained for Dr. Hall first to describe it. M. Andral has noticed it in his recent work on Pathological Anatomy, and compares it, as Dr. Hall did many years ago, to the condition of an animal whose pneumo-gastric nerves had been divided.

"The symptoms of exhaustion with excessive reaction may gradually subside, and leave the patient feeble, but with returning health; or they may yield to the state of sinking. This term is adopted not to express a state of negative weakness merely, which may continue long and issue in eventual recovery, but to denote a state of positive and progressive failure of the vital powers, attended by its peculiar effects, and by a set of phenomena very different from those of exhaustion with reaction.

"If in the latter the energies of the system were augmented, in the former the functions of the brain, the lungs, and the heart, are singularly impaired. The sensibilities of the brain subside, and the patient is no longer affected by noises as before; there is, on the contrary, a tendency to dozing, and gradually some of those effects on the muscular system which denote a diminished sensibility of the brain supervene, as snoring, stertor, blowing up of the cheeks in breathing, &c. Instead of the hurry and alarm on awaking, as observed in the case of excessive reaction, the patient in the state of sinking requires a moment to recollect himself, and recover his consciousness; is perhaps affected with slight delirium, and he is apt to forget the circumstances of his situation, and, inattentive to the objects around him, to fall again into a state of dozing.

"Not less remarkable is the effect of the state of exhaustion with sinking on the function of the lungs: indeed, the very first indication of this state is, I believe, to be found in the supervention of a crepitus in the respiration, only to be heard at first on the

most attentive listening; this crepitus gradually becomes more audible and passes into slight rattling, heard in the situation of the bronchia and trachea; there is also a degree of labour or oppression, sighing, hurry, blowing in the breathing, inducing acuteness in the nostrils, which are dilated below and drawn in above the lobes at each inspiration; in some cases there is, besides, a peculiar catching, laryngeal cough, which is especially apt to come on during sleep, and awakes or imperfectly awakes the patient.

"The heart has, at the same time, lost its violent beat and palpitation, and the pulse and arteries their bounding or throbbing.

"The stomach and bowels become disordered and flatulent, and tympanitic, and the command over the sphincters is impaired.

"The last stage of sinking is denoted by a pale and sunk countenance, inquietude, jactitation, delirium, and coldness of the extremities." (P. 44.)

We next come to the subject of exhaustion with *delirium*. This Dr. Hall regards as constituting a peculiar and not unfrequent form of mania, whether connected or unconnected with the puerperal state. Dr. Hall has perhaps some reason to complain that neither Dr. Abercrombie nor Dr. Gooch has referred distinctly enough to his important and original views on this subject.\*

In the fourth chapter, some very important observations are made "on the effects of further loss of blood in cases of exhaustion." In confirmation of his views upon this subject, Dr. Hall refers to a recent communication of Mr. Brodie to the Medico-Chirurgical Society.

The treatment of the effects of loss of blood is very succinctly but clearly described.

"The constitutional treatment must be stimulant in syncope, sedative and soothing in the state of reaction, and restorative in that of sinking. The local treatment must vary with the organ chiefly affected, and with the mode in which it is affected.

"When syncope assumes a dangerous form, the principal remedies are, an attention to the posture of the patient, stimulants, and chiefly brandy, and the transfusion of blood.

"The effect of posture is not, even now, fully known. It would be easy to allow the patient to lie over the edge of the head, the head low upon the floor, and the feet greatly raised. In this manner such pressure would be restored to the encephalon as would in many cases support life until, other remedies being administered, the patient might be placed out of immediate danger.

"I need not, in this place, notice the importance of a regulated mode of giving brandy and nourishment. I think it is frequently

\* Commentaries on some of the more important Diseases of Females. By MARSHALL HALL, M.D. &c. 1827.

given in such quantities as actually to induce sickness and its own rejection from the stomach, and so as to frustrate the object of the physician completely. The effect should be carefully watched. The physician ought not, of course, in such a case, to leave the patient for a moment.

"The next remedy is transfusion. Unfortunately it has too frequently happened that the proper period of adopting this measure has been allowed to pass by. Not only the vascular system is exhausted, but after a time the functions of the nervous system have begun to fail. It might be a question, therefore, whether galvanism might not be usefully conjoined with transfusion.

"It is an important point to determine how large a quantity of blood the system will bear to receive under various circumstances of exhaustion. Too much may overwhelm; too little may be inadequate to the accomplishment of the object in view.

"It is also an important question whether the operation should be done at once, or at twice or thrice, and with what intervals. As the system cannot bear a sudden reduction of the quantity of blood, so it may not be enabled to bear its too sudden restoration.

"It is almost needless to add, that a due attention must be constantly paid to assist the arterialization of the blood, by the admission of fresh air; and to sustain the animal heat by proper clothing, and especially warm applications to the feet.

"If there should be convulsions, delirium, or coma, it may be necessary to apply a sinapism to the nape of the neck; and in the two former cases some mild sedative, as the tinctura hyoscyami, may be of advantage.

"In the case of excessive reaction, the remedies appear to be, first, extreme quiet of body and of the mind; then the mildest sedatives, especially the hyosciamus; thirdly, the mildest nutriment; and lastly, and above all, time.

"The pain and throbbings in the head, the intolerance of noises, the general susceptibility to disturbance, the palpitations of the heart, alike demand the utmost quiet, to which every thing soothing in the manner and treatment must be added. The tinctura hyoscyami is, I think, the kindest anodyne and sedative in these cases. The cause, and other circumstances of the case, point out the necessity for mild nutriment, to which, perhaps, the minutest quantities of brandy may be added.

"It may be necessary to subdue the throbbing action of the head, by local bloodletting even; and it is most remarkable how small a quantity of blood being taken will relieve. An interesting example of this kind is given at page 95. Two or three leeches are frequently quite sufficient.

"But the most unequivocal remedy is a cold spirituous lotion applied all over the head, by means of a cap consisting of one fold of stocking.

"In exhaustion with delirium, the tinctura hyoscyami should be conjoined, in full doses, with the other remedies. The morbid susceptibility, not only of the brain, but of the heart, is greatly assuaged by this remedy.

"In cases of exhaustion with sinking, stimulants must be administered abundantly. Cataplasms of mustard may be applied to the nape of the neck and to the feet. It is difficult to imagine what would be the effect of the transfusion of blood; I have no doubt that galvanism would prolong life; and I think the two remedies might be conjoined with advantage.

"In all cases of exhaustion the functions of the bowels suffer. Constipation and flatulency are the usual consequences. These are best relieved by the warm water enema; which must, however, of course, be administered with due precaution, to prevent further exhaustion.

"It is interesting to observe the blunted sensibilities in syncope and in sinking, and to compare them with the morbidly acute sensibilities of the state of reaction. Sinapisms to rouse, and the tinctura hyoscyami to lull them, are, in their respective places, remedies of the greatest value.

"Sinapisms may tend to save or prolong life, in the sinking state, on the principle of exciting inflammation. For it will be seen shortly that, during a state of inflammation, the system is far less susceptible of the effects of loss of blood generally than in health." (P. 108.)

In several appendices, Dr. Hall treats of the similarity between the effects of loss of blood and the state of bloodlessness which exists in chlorosis; of a hydrencephaloid affection of infants arising from exhaustion, of which we recently gave a very full account; of exhaustion arising from abstinence, and of the sinking state in general.

In our next Number we shall give the substance of the second part of this very interesting work, which we cannot too strongly recommend to the notice of our readers.

## COLLECTANEA.

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Floriferis ut apes in saltibus omnia libant,  
Omnia nos, itidem, depascimur aurea dicta.

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## PATHOLOGY.

*Tubercles found in the Lungs of a Child aged two months. By Dr. BRICHETEAU. (Journal Complementaire, &c.)*

THE mother of this infant was of a very weakly constitution, the father had had several attacks of pulmonary disease, and the grandfather and aunt had died of consumption. The child was born with an inguinal hernia on the right side, and the various symptoms under which it laboured during its short existence were attributed to inflammation of the intestines. It was pale and emaciated; had constant diarrhoea, short and laborious breathing, and occasional cough. At the age of two months the child died. The body was examined by Dr. B. and M. ELEMUNCEAU. The lungs on both sides were thickly studded with miliary tubercles. The right lung was hard and compact, and externally of a red colour, and contained throughout its whole extent numerous miliary granulations. It appeared impossible that this lung could permit the free transmission of air. About three fourths of the left lung were in the same state. It was externally redder than the right. Heart and pleuræ natural. The intestines were very pale, and presented no appearance of disease. The abdominal ring, through which the hernia had descended, was sufficiently dilated to admit a finger.

In the opinion of M. Bricheteau, the tuberculous affection of the lungs had not developed itself after birth. He concluded it to be a hereditary transmission from the father and grandfather. This fact is not devoid of interest, inasmuch as many pathologists assert that, although the *disposition* to tubercular consumption may be transmitted by parents to their offspring, the tubercles are always formed after birth, and rarely at a very early period of life.

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*Case of Quotidian Remittent Fever, caused by an Abscess near the Anus, and treated ineffectually by Quinine. By Dr. BRICHETEAU. (Ibid.)*

A lady had suffered many days from a paroxysm of fever, with shivering, heat, and sweating. The type was evidently not intermittent; for, after the paroxysm, the pulse still indicated the continuance of febrile action, and there remained headach, anorexia, and wandering pains in the limbs. After having ascertained that there was no visceral disease, Dr. B. prescribed six grains of sulphate of quinine, after which the paroxysm did not occur in so short a period. The second dose, of nine grains, produced great irritation of the stomach, and the attack of fever returned at the same hour as at first.

From the failure of so powerful a remedy, the patient was more closely questioned, and it was ascertained that she was troubled with piles, which had caused her much suffering, but that she had not mentioned this circumstance, as her mind was entirely occupied by her febrile disease. Upon examination, Dr. B. found not only hemorrhoidal tumors, but a phlegmonous swelling, about the size of a pigeon's egg, situated immediately below the

coccyx. This tumor was hard, painful on pressure, and evidently contained matter. Leeches were applied, and afterwards an emollient poultice; mild diet. The abscess shortly opened into the rectum, and a considerable quantity of pus was discharged. A second opening took place externally, near the margin of the anus, by which pus was also discharged, and a part of the clysters that were administered. A fistula, consecutive to the abscess, had formed. The paroxysms of fever ceased from the day the abscess broke. The patient was much relieved, and was ultimately entirely cured by the operation for fistula in ano.

The candid statement of this case is highly creditable to the relater of it. Dr. B. confesses the erroneous diagnosis he originally formed, and trusts that his open avowal may prevent similar mistakes, by impressing upon practitioners the urgent necessity of accurately examining their patients at their first visit, when a definite opinion is too often formed from insufficient inquiries.

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*Pulmonary Tubercles.* In the October Number of the *Ephemerides Medicales*, 1828, is a very interesting analysis of an essay upon Tubercles, by M. HENRI CLERMONT LOMBARD, of Geneva. According to this author, tubercles are an inorganic secretion, and augment in size by juxtaposition. He distinguishes them into simple and compound. The first are isolated, and the different molecules of which they are composed are united without any intermediate substance; the second result from the agglomeration of several simple tubercles: these, originally separated, in approaching each other, enclose in their intervals a portion of the organ in which they are developed, the life of which is destroyed by the tubercle thus formed.

Contrary to the opinion of Laennec and Louis, M. Lombard maintains that what have been termed pulmonary granulations are not tubercles in their commencing state, but a variety of chronic pneumonia, a hypertrophy of the vesicular parietes, as Andral had already described them to be. They may also, M. Lombard is convinced, be the result of a hypertrophy of the external cellular coat of the pulmonary vessels.

According to Laennec, Louis, and others, tubercles become softened from the centre to the circumference. This opinion is combated by the present author: according to him, the softening is produced by the action of the surrounding living structure, in its attempt to free itself from this morbid secretion, which, as a foreign body, impedes its functions. The molecules of the tubercle are separated from each other, and softened by the pus secreted around them: in this state of fluidity they are readily expelled. The softening, therefore, according to M. Lombard, takes place from the circumference towards the centre of the tubercle.

What is the seat of tubercles? Are they developed in the cellular tissue which unites the different portions of an organ; or do they form upon the surface of the mucous membranes? Bayle, Baillie, and Blainville consider the first opinion as demonstrated; Laennec and Louis think it probable that they may be developed upon mucous surfaces, while, according to Cruveilhier, this is undoubtedly the case. M. Lombard is of opinion that no facts have as yet occurred to demonstrate the latter supposition: he conceives it very probable that tubercles are developed in the cellular tissue, and that, if they have been found in the different canals, or in the cavities of the body, this has been in consequence of erosion or ulceration having permitted them to be removed

from the part in which they were originally deposited. That tubercles are not formed, as some have supposed, within the bronchia or air-cells of the lungs, would appear to be proved by the observations of Gendrin, who ascertained, by injections and microscopical examinations, that the bronchia were free and permeable, notwithstanding the existence of tubercles in the lungs: it is thus he distinguishes them from the morbid muco-purulent secretion, which fills the final air-cells in severe cases of bronchial catarrh, and which many physicians have confounded with tubercles.

With respect to the connexion between inflammation and tubercles, whether it is sufficient for their production, or (as some maintain) has no effect whatever upon them, M. Lombard, taking the medium between these two extremes, is of opinion that it acts only as their occasional cause.

According to M. Lombard, the remote causes of tubercles are an hereditary predisposition, the lymphatic temperament, the sanguineo-nervous temperament, a cold and humid state of the atmosphere, inhabiting unhealthy situations, youth, the female sex, and an alteration of the fluids arising from bad food. The occasional are, sanguine or passive congestions, the activity of one or more organs, and the alteration of the fluids.

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#### PRACTICAL MEDICINE.

*Application of Iodine to Scrofula.* The following is part of a report by MM. MAGENDIE, SERRES, and DUMERIL, on a Memoir by M. LUGOL.

"M. le Dr. Lugol has treated 109 scrofulous cases, at the Hôpital Saint Louis, within seventeen months, with iodine alone. At the end of the last year, 39 still remained under superintendence, 30 had left the hospital very much improved, 36 had gone away completely cured, and in 4 cases only did the remedy seem quite inefficacious. The author concludes, from this mass of experience, that iodine should be considered as the most powerful and efficacious remedy in scrofulous cases, since it has constantly arrested the progress of the disease, or at least has exerted a salutary action upon the tuberculous tumors, where it has not decidedly produced their cure; and therefore that, in that point of view only, its introduction into medicine is one of the most valuable acquisitions the healing art has made in late times." The reporters say they are able to bear witness to the curative power of iodine in these cases, and consider the memoir and exertions of Dr. Lugol as highly useful.—*Revue Encyclop.*

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#### SURGERY.

*Laryngotomy.* A man, aged twenty-five years, was irritating his nostril with a needle, when, by some accident, he suffered it to enter the nostril, through which it passed, and fell into the pharynx. The needle was armed with a large thread, which disappeared entirely. Much irritation and cough were excited, by which the thread of the needle were thrown out. The patient endeavoured, by means of the thread, to extract the needle, but in vain. The respiration and voice becoming affected, and renewed attempts at extraction failing, the patient entered the Hôpital Beaujon, on the 18th of June, 1828. The symptoms of inflammation, swelling, &c. in the pharynx and larynx were now considerable; the voice was nearly lost; spasmodic contractions of the muscles of the neck were excited, and the soft parts in front of the trachea were much swollen.

The house student, having in vain endeavoured to extract the needle by means of the thread, sent for the surgeon, M. BLANDIN. The thread had now re-entered the pharynx, and all researches by means of the finger and forceps would not enable him to determine where the needle was fixed, whether in the larynx or pharynx. As the difficulty of respiration was still supportable, no operation was undertaken, but antiphlogistics, general and local, were employed with some advantage. On the evening of the 21st, the thread was again ejected, by means of which M. Blandin discovered that the needle had entered the superior aperture of the larynx on the left of the epiglottis. On the 22d the operation of laryngotomy was performed, by making a cautious dissection through the indurated and swollen parts, in front of the larynx, then carefully puncturing the crico-thyroid membrane, and afterwards dividing, by means of a director and bistoury, the thyroid cartilage, through its whole length on the median line. The respiration was now much relieved, and an attempt was made to discover and remove the needle by means of the forceps; but the irritation excited was so great as to induce the operator to desist. The wound was lightly dressed by means of a perforated compress covered with simple cerate, and the patient removed to bed. The night was passed comfortably; and the next day the needle, of a black or bronzed colour, and nineteen lines in length, was found fixed in the compress covering the wound.

The wound gradually healed, so that by the beginning of September merely a small fistula remained; but the voice was hoarse, there was some pain at the larynx, and other indications of chronic inflammation, for which leeches, a seton, &c. were prescribed with little advantage. The treatment was, however, continued, caustic was applied to the fistula, and by the 30th of September the sinus was closed, and the voice acquired more force.—*Rev. Med.*

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*Wound of the Heart.* Dr. LEONARD RANDALL, of Tennessee, relates the case of a negro boy, shot in the breast with a common fowlingpiece, loaded with shot, who lived for two months and six days after the accident. On dissection, it was found that the right lung was nearly destroyed, the left lung was much inflamed, and several shot were found in its substance; the pericardium was partially adherent, and part was absorbed; while the heart was enlarged, partially adherent to the pericardium, and its parietes indurated. On opening the right ventricle, three shot were found in its cavity! This ventricle was greatly enlarged, and lined with a thick coat, from which there projected numerous papillæ of a dun colour, giving it the appearance of the upper surface of the tongue of an ox. Two shot were also found in the right auricle, but the internal surface was not much injured by their presence.—*Western Journal of Med. and Phys. Sciences.*

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#### MIDWIFERY.

*Labour retarded by a preternatural Septum in the Vagina.* Professor RICHARDSON, of the Transylvania University, relates the case of a female in labour with her third child, in whom delivery was prevented by a preternatural septum in the vagina. After a careful examination, the head was found presenting and pressing against the new membrane, which however yielded very little to vigorous uterine contractions. A small orifice was eventually discovered in the centre of the septum, through which the liquor amnii had



been discharged. Dr. R. divided this septum, by making a small incision with a probe-pointed bistoury, and then enlarging the opening with the finger towards the rectum and pubis. Labour advanced rapidly, although some resistance was still made by the lips of the septum. Mother and child did well, although the latter was born in a state of asphyxia.

From the history given by the patient, there was no satisfactory explanation of the occurrence of this preternatural membrane. Her second labour, although tedious and painful, was not followed by any bad consequences, and she was not conscious of having ulcerations or any other disease of the vagina. —*Trans. Journal of Med.*

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*Ossification in the Placenta.* In the Vierteljährigen Sanitätsberichten, (Hufeland and Osann's Journal, June 1828,) Dr. KATERBAU states that, in the month of February, 1828, a woman was delivered of a healthy female child. She had complained, many weeks previous to her confinement, of a pain in the womb, and a feeling as if something within it pricked and cut her: for these sensations many remedies were administered without effect. After the tolerably speedy birth of the child, the placenta did not come away, and the midwife, supposing it to adhere, proceeded to loosen it, which was easily done. During the operation, the patient complained of violent pricking within the uterine.

Upon inspecting the placenta, remarks the Doctor, I found that throughout its substance were interspersed numerous spicula of bone, the whole of which resembled the points of ossification in a foetal skull. They were firmly united to the integuments of the placenta, and in some parts, especially over the insertion of the cord, were arranged together so as to present somewhat of an arborescent appearance.

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*On the Means of affording Respiration to Children in reversed Presentations.* By JACOB BIGELOW, M.D. Professor of Materia Medica in Harvard University. (Extracted from the *American Journal of Med. Sciences*.)

It is familiar to obstetric practitioners, and is noticed by most writers on Midwifery, that in those cases of labour in which the body of the child is delivered before the head, a considerable degree of danger exists in regard to the life of the child. Rules for the conduct of such cases are laid down by writers, yet it cannot be denied that, in the hands even of skilful practitioners, many children, which are alive when the body is expelled, are irrecoverably lost before the head can be extracted. In these cases, death takes place because the connexion with the mother is interrupted, by compression of the cord, or detachment of the placenta, before a communication with the atmosphere is effected.

It is the object of the present paper to show, that in many such cases the life of the child may be saved, by forming a communication between the mouth and the atmosphere, previous to the delivery of the head.

After the body is expelled, if the head can be seasonably delivered, either by the recurrence of pains or by the successful efforts of the practitioner, no difficulty ordinarily occurs. But this desirable state of things cannot always be realized. Too frequently the size of the head, and the resistance of the pelvis or soft parts, renders the delivery difficult and hazardous, and the practitioner, in the midst of his efforts, is apprised by a convulsive jerk or

spring of the body, that a state of extreme danger exists, and that the time has come at which the child must breathe or will speedily die. If at this period the fingers be introduced, so as to reach the mouth of the child, it will be perceived that each jerk of the body is attended with a gasp and convulsive effort at inspiration, performed by the mouth and chest of the child. In this state of things, if air be conveyed to the mouth of the child, it will immediately breathe, and the efforts of nature, as will hereafter be shown, may in most cases be safely waited for to assist in expelling the head.

The method to be pursued in conveying air to the mouth, depends upon the situation of the head. If the chin has descended low in the pelvis, so that the mouth rests upon the perineum or lower part of the sacrum, and can be readily reached by the fingers, the hand of the operator alone is sufficient to give the assistance required. But if the mouth is situated so high in the pelvis as to be reached with difficulty, or if, from the relative size of the head, there is much compression, the assistance of a tube may be of use. The mode of proceeding which I have found successful in various instances, is as follows: As soon as the body and arms are extracted, supposing the face towards the sacrum, an assistant supports the body, carrying it towards the pubis; or the reverse, should the position of the face be to the pubis. The accoucheur should then introduce the hand to which the face looks, till the middle fingers rest upon the mouth of the child. The hand is then to be raised from the throat of the child, making the ends of the fingers a fulcrum, and pushing the perineum backwards. The air will thus pass upwards as far as the chin of the child. The middle fingers are now to be separated about half an inch from each other, and thus a complete passage will be formed between them, by which the air will reach the mouth of the child. If the child be in a healthy state up to this period, it will immediately breathe and cry, and the delivery of the head may be safely postponed until the natural pains recur. If, from any degree of asphyxia, the child does not immediately breathe, it may often be made to do so by dashing cold water upon the body, or by any other stimulating processes. It has even appeared to me practicable to inflate the lungs in some cases, through an elastic catheter. When the mouth is so high in the pelvis as to be reached with difficulty, or when the compression is so great as to obliterate the cavity between the fingers, a flat tube will be found useful, made of metal, of spiral wire covered with leather, or of elastic gum, and having its largest diameter about half an inch. If the tube be of metal, or of any incompressible material, it should be withdrawn during a pain, to prevent contusion of the soft parts, and immediately replaced, if the pain subsides without expelling the head. Such a tube may be considered as a prolongation of the trachea, and is fully sufficient to sustain life by respiration for a considerable time. The tube must be guarded and directed by keeping it between the fingers of the inserted hand.

The following are a part of the cases which have occurred to me in practice, affording an opportunity for the trial of this method.

CASE I. A patient was in labour with her second child, August 8th, 1824. The case was one of breech presentation, and without any unusual occurrence the body and arms were delivered in about three hours after my arrival. The position of the head was of the most common kind, with the vertex above the pubis, and the face in the lower part of the hollow of the sacrum. At this time my left hand was passed upward, with a view of depressing the chin, but the child being large, it required some effort to reach the mouth with the

fingers. The time consumed in doing this was too great for the safety of the child, and the convulsive spring of the body took place. I was forcibly struck at the same moment by perceiving a gasp of the mouth at the ends of my fingers, and the idea occurred that, if a communication could be made to the atmosphere, the child would respire. Attempts were made, without success, to extract the head by a moderate force, aided by the efforts of the mother and by pressure made by an assistant over the fundus of the womb. At the same time the hand which rested over the mouth and throat was raised a little, and the fingers opened to give passage to the air. The child soon gave another convulsive spring, and at the same moment inspired. The hand being retained in the same position, a slow but constant respiration continued, accompanied with a low, moaning cry for eight or ten minutes, when the recurrence of a pain caused the head to be delivered. During the whole of this period, before the final pain, the mouth was several inches within the perineum.

CASE II. This case occurred May 1st, 1826, and was also a breech case. Being a first labour, it was protracted for eighteen hours. After the presentation was ascertained, I had made, in a hasty manner, a tube about five inches long and half an inch wide, slightly flattened, and slightly bent over at its extremity. The case being one of more than common interest, I provided myself likewise with forceps. Although the mother had been in perfect health, yet the body of the child, when expelled, was found emaciated and dark-coloured, exhibiting marks of feeble life. As much force as it was thought justifiable to use was employed to extract the head, with no other effect than to bring the mouth within about two inches of the edge of the perineum. The tube was now introduced, and placed in the mouth of the child, but it did not respire. It will be observed, that the child had exhibited no convulsive effort, nor any signs of being alive. An attempt was now made to inflate the lungs, which failed, apparently from want of tightness in the tube, the joining not having been soldered. It nevertheless appeared to me practicable to have inflated the lungs in this situation, with a suitable tube, since the tightness with which the perineum covers the face would assist in preventing regurgitation of the air. The foregoing attempts having proved unavailing, the forceps were introduced, with the aid of which the head was extracted. The child was resuscitated with great difficulty, and did not breathe spontaneously until artificial respiration had been kept up, by inflating the lungs through a quill, for more than half an hour. It was two hours before the respiration became so perfect that the child could be left to itself. I have no doubt that this child would have respired before the birth of the head, had there been sufficient constitutional vigour to produce the effort.

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#### CHEMISTRY.

*New Source of Spirit.* It is stated that the berries of the Sorbus Aucuparia are now used in the north of France for the production of a spirit, and the result is said to be equal to the purest distillation from grapes for brandy. The berries, when perfectly ripe, are first exposed to the action of cold in the open air, then put into a wooden vessel, bruised, and boiling water poured on; the whole being stirred until it has sunk in temperature to 82° F. A proper quantity of yeast is then added, the whole covered up, and left to

ferment. When the fermentation is over, the liquor is to be put into the still and drawn over in the usual way. The first running is weak and disagreeable in flavor, but, being distilled from off very fresh finely powdered charcoal, in the proportion of eight or nine pounds to forty gallons of weak spirit, a very fine product is obtained. The charcoal should remain in the liquid two or three days before the second distillation.

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*Passage of Iodine into the Blood.* M. BENNERSCHIEDT has published, in the *Archiv. des Apotheker*, a notice of his examination of the blood of an individual who had for a long time employed frictions with iodine ointment. The serum gave no indication of the presence of the iodine, but it was detected in the crassamentum by a slight blue tinge which it communicated to starch.—*Journal de Chimie Médicale.*

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#### NATURAL HISTORY.

*Curious Phenomenon in Vegetable Physiology.* M. ALIX, of St. Valery, near Somme, has in his possession an apple-tree, the source of which is unknown, and the age supposed to be forty years. This tree, which perfectly resembles the ordinary apple-tree in its leaves and the disposition of its flowers, differs by the flowers being deficient of petals and stamina, but possessing instead fourteen styles and a calyx with ten segments, connected below, but disposed in two alternate ranges. The peduncle of the flower is woolly, and the styles, being slightly hairy at the base, are surmounted by a very viscid oblique stigma. In consequence of the organization of these flowers, the tree was sterile, until, it having been suggested that artificial fecundation could be effected by means of pollen taken from other apple-trees, the tree was made to produce fruit. Since then it has become a sort of festival in the country to render the tree productive; and those of the neighbourhood who feel an interest in the progress of the tree, when it comes into flower, so soon as they meet with a perfect apple flower elsewhere in fine dry weather, they pluck it, and apply it to one of the flowers of the sterile tree, and leave it there until it falls off; then the person distinguishes the flower by attaching a coloured ribbon to it, so that in the autumn each may know his apple.

The apples differ much from each other in their size, taste, and colour, because of the variety in the trees from which the perfect flowers were taken; but they are all distinguished by a degree of contraction, situated nearly about one third from the end. Within each apple are fourteen cells, situated in two horizontal and parallel planes; five of these are disposed as in the ordinary apple, in the middle of the fruit; but the other nine, which are smaller, are nearer to the top of the apple. Each cell does not always contain a seed; the number of the latter varies from three to nine. The arrangement of these cells has some analogy with the appearance which two apples would present if fastened end to end, and of which the longitudinal section would present the figure of a leaf in the shape of a violin or panduriform.

WILDENOW, POIRET, and others, have described unisexual apple-trees, in which the petals and stamina were absent; but they differ from the tree of St. Valery in their fecundation being effected by the vicinity of other apple-trees, and in having only a five-leaved calyx, from five to ten styles, and five cells in the fruit. M. TILLETTE DE CLERMONT explains the present case by the theory of junctions and miscarriage developed by M. DE CANDOLLE. In

applying this theory to the tree in question, it must be imagined that there is the flower of an ordinary apple-tree, from which are developed two other flowers, which, instead of being supported on separate peduncles, must be considered as joined together, and at the same time conjoined with the simple flower from which they have their origin; and this in such a manner, that the soldered ovaria of the two upper flowers are superposed and soldered to the ovarium of the inferior flower, a style and a cell being at the same time suppressed. This natural monstrosity, therefore, is the product of three flowers soldered together, in which there is at the same time suppression of the petals, stamina, a calyx, and a pistil. The examination of the fruit leaves no doubt on this subject, and evidently proves the truth of M. Clermont's hypothesis.—*Revue Encyclop.*

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*On the Prickle which exists in the Tail of the Lion.* Two lions, which died some months ago in the menagerie of the King's Garden at Paris, have furnished an occasion of verifying a curious fact, mentioned in some old works, but which modern authors have generally omitted: it is that there exists at the extremity of the lion's tail a small claw, concealed in the midst of the tuft of long black hairs which occurs there. It is a horny production, about two lines in length, which presents itself under the form of a small cone a little curved, and adhering by its base to the skin only, and not to the last vertebra, which is separated from it by a space of two or three lines. This small claw exists in both sexes. The commentators of Homer thought they could explain, by the presence of this claw, a curious and correct remark made by the author of the Iliad, which was, that the lion is the only animal which, when irritated violently, agitates its tail, and strikes its sides with it. They imagined that the lion sought to excite himself by pricking his sides with the horny production in question. BLUMENBACH, some years ago, verified the existence of this prickle; but the pamphlet in which his observations are contained has remained unnoticed by naturalists, and the curious fact of which we speak might long have remained unknown, had not M. DESHAYES happened to see the pamphlet in question, and engage the naturalists who more particularly study the department of mammalogy, to make some observations on the subject. This prickle, or spur, adhering only to the skin by the circumference of its base, is very easily detached. In general, no traces of it remain in stuffed individuals. It has not yet been observed whether it exists equally in the other large species of the genus *Felis*.—*Edinb. New Philos. Journal.*

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*On a dangerous Plant growing among Watercresses.* The procumbent water-parsnip, or *Sium Nodiflorum*, is a dangerous plant of the umbelliferous class, which grows mixed with watercresses in springs and streams: when not in flower, it so much resembles the latter, that it is with difficulty distinguished except by a botanist. Watercresses are of a deeper green, and sometimes spotted with brown, and the extremities of the leaves are more round, and especially the last leaves, which are in pairs larger than the others, and undulated at their edges. The water parsnip, on the contrary, is of a uniform green, the ends of its leaves are longer and narrower, conical at the extremities, and toothed at the edges. The best method of knowing them well, is to examine them in July, when their flowers are expanded, and when they may be thoroughly distinguished from each other.—*Quarterly Journal of Science.*

## MISCELLANEOUS.

*Air introduced into the Veins of a Cock.* M. DIEFFENBACH having procured a strong large cock, two years old, with a very thick and large comb, propelled into the jugular vein as much air as he was able at one continued expiration. The animal made a loud noise, and fell dead; its wings and thighs were strongly convulsed. In one second, the comb, which was before of a deep red colour, was spotted white and blue. The pulsation of the heart ceased immediately after the introduction of the air; the pupils were much dilated. When small portions of the comb were cut off, a quantity of frothy blood issued from the little wounds. Some of the bubbles adhered to the comb, and several of them acquired the size of a lentil, in consequence of air issuing from the vessels of the part. When the whole of the froth was wiped away, the same phenomenon again occurred, and continued for several hours. The next day the body of the bird was examined. The left cavities of the heart were nearly empty. The right were full of black coagulated blood. The large veins also full of coagulated, and the arteries of liquid blood. Air could not be detected in any part excepting here and there between the laminæ of mesentery, which were raised up like globular vesicles. The whole of the skin had a spongy feel, probably from air being contained in its minute vessels.—*Journal Complémentaire.*

*Mechanical Leech.* A mechanic of Brussels has recently invented an ingenious instrument, intended to be used instead of leeches, when they are scarce, or cannot be procured. It consists of a triangular punch, which makes a wound exactly similar to the bite of a leech. Within this instrument is a small exhausting pump, composed of a sucker placed below the punch, and a little piston also furnished with a sucker. When the piston is raised, the sucker within the cylinder permits the blood drawn to ascend, and when the piston is pushed down, the lower sucker closes, and the blood is thrown from the instrument. By means of this ingenious little apparatus, as much blood may be drawn as is required, and it may be applied precisely upon any diseased part.—*Industriel Belge.*

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 INTELLIGENCE.
 

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*Decree of the Court of King's Bench, establishing the Legality of Charges for MEDICAL ATTENDANCE by General Practitioners.*

The mode by which general practitioners have hitherto been remunerated for their professional labours, by sending medicines to their patients in an expensive form, is no less derogatory from the respectability of the members of a liberal profession, than it is unjust and disgusting to the public. This much to be reprehended custom, however, has not been continued from the inclination of the general practitioner; he has been compelled to adopt it to secure to himself a legal demand for the services he had rendered; for, until the present decision by Lord Tenterden, it has been understood that no charge for medical attendance could be substantiated by the general practitioner in a

court of justice. Every man who desires to raise himself or the body to which he belongs in the estimation of the public, will gladly take advantage of this decree. The general practitioner will henceforth send to his patients such medicines only as may be required, and make a charge for attendance, which must of course be graduated by the circumstances of the party. Many of the leading general practitioners in the metropolis have long indeed acted upon this principle; and, although the appearance of a moderate demand, in a single line, may be objected to by some who would freely pay treble the amount, provided they have the satisfaction of being furnished with a long list of items, under the denomination of pills, powders, and potions, we know from experience that it ultimately tends to the advantage of the practitioner in every point of view. We could indeed mention many instances in which a general practitioner has been particularly selected, by families of the highest respectability, because he had adopted the more honourable plan of sending no medicines that were not absolutely necessary, and of charging for his attendance. The chief difficulty in carrying this plan into general execution is obvious. How much is the general practitioner to charge for each visit? To this question it must be answered, that no definite sum can be abstractedly fixed. Medical attendance must be considered like every other saleable article, and whether it be furnished by the physician or the apothecary, the price of it must fluctuate, according to the means of the consumer. Most physicians are nothing loath to pay several visits for one fee, rather than lose the patient; the general practitioner must of course be guided by the same principle; and, while he endeavours to secure to himself a fair remuneration for the harassing discharge of his duties, from those who are capable of paying for medical attendance as it ought to be paid for, he must never be unwilling to shew the same kindness and attention to those whose circumstances debar them from bestowing an equivalent reward. The following report will be read with no ordinary interest by every general practitioner, all of whom must feel highly indebted to Mr. HANDEY for the signal service he has rendered to that branch of the profession to which he belongs, by having boldly submitted his very honourable demand to the decision of a court of justice.

COURT OF KING'S BENCH, SATURDAY, JAN. 9, 1830.\*

HANDEY v. HENSON.

Mr. THESSIGER said, that this was an action brought by Mr. James<sup>s</sup> Handey, surgeon and apothecary, against Mr. Henson, of Upper Stamford street, an attorney of this court. The demand was for £7 0 6, for medicines and attendance furnished to the defendant's family. The first attendance was on a child of the defendant, to whom Mr. Handey was first called at night. He continued this attendance for a short time, and the child required but little medicine. He thought it proper to state here to the jury, that Mr. Handey had adopted a line of conduct in his medical practice, which he (Mr. T.) considered highly honourable and respectable. It was that of not sending in large quantities of useless medicines, but attending when necessary, and charging for his professional talents and visits. Having mentioned this circumstance, he referred to the next occasion, on which a charge was made by the plaintiff. The case was that of Mrs. Henson, the defendant's wife, who had a severe eruption of the face, which the plaintiff told her might be re-

\* *Lancet*.

lieved with little medicine, which was accordingly furnished. After an attendance of a little more than five weeks, the plaintiff charged five guineas for the medicines and visits, in one charge. This formed the second part of the bill; the third, and last, was for attendance on the defendant's mother-in-law, in which the same honourable mode of procedure was observed. The only difficulty which presented itself to him (Mr. Thessiger) was, that of proving the visits; but he trusted he should show to the entire satisfaction of the jury, by the evidence he meant to produce, that the medicines were supplied, and the attendances furnished, for which the charges were made. He should now call his witnesses.

**LORD TENTERDEN.** Is the plaintiff qualified under the act, or was he in business before the year 1815.

**MR. THESSIGER.** He was in business before 1815, my Lord. I will call Mr. White.

**MR. JAMES WHITE,** of the firm of White and Cantherly, proved having supplied the plaintiff with drngs, and having waited on him three times prior to the year 1815, and that the plaintiff was in practice as a general practitioner before that time.

**MR. JACOB DIXON** sworn: Was an apprentice of the plaintiff at the time of these visits; recollects the plaintiff being sent for in the night to the child, and his subsequent putting up and sending out the medicines necessary for Mrs. Henson's disorder. Had applied from fifteen to twenty times for the amount; judged what was the nature and state of the disorder from what the plaintiff communicated to him, and saying what the medicines were for. Defendant's wife had frequently promised to pay the bill. In answer to a question from Lord Tenterden, the witness said he could never see the defendant, either at his own house or his office. The defendant seemed to avoid him.

**MR. JAMES THORN** was called to prove the remainder of the bill. Recollected not only putting up, but frequently taking the medicines to the house himself.

**MR. WILLIAM LOBB,** surgeon, of Aldersgate street, had seen the plaintiff's bill, and considered the charges perfectly fair and reasonable.

**MR. PLATT,** for the desendant, commented generally on the plaintiff's case. He admitted the first and latter parts, and objected only to the charge in the bill of £5 5 0. He called upon the jury to look at the account, in which the charges for medicines amounted to about 50s., leaving the remainder to be made up by visits, which there was no proof had ever been made; this, he thought, entitled him to their verdict. Mr. Platt called no witness.

**LORD TENTERDEN.** Gentlemen of the jury, this action has been brought, as you have heard stated, by Mr. Handey, a respectable surgeon, residing in Waterloo Bridge road, against the defendant, Mr. W. S. Henson, an attorney of this court, for the recovery of the sum of £7 0 6, for medicines and attendance. The first and last items are not disputed. In one part of the bill there is a charge of five guineas, which appears to be for five weeks' attendance and medicines. There does not seem to be much dispute as to the charge for the medicines, but for the visits; and of these, it is said, there is no proof; but I cannot see how a medical man is to prove these attendances. It may be said that when he makes them, he has his servant behind his carriage, or with him; but what can that servant prove? The opposing counsel says, that the persons in the house of the patient might be called to prove the



attendances, but how are these servants or persons to be got at, or how are their names to be obtained? I think, Gentlemen, that the plaintiff has proved as much as can be expected; and Mr. Dixon proves that, on the plaintiff's return from his daily professional calls, the visits were entered in a book by him under the plaintiff's order, or by Mr. Handey himself. I cannot see, if a medical gentleman pursues the same honourable plan which this gentleman has done, of not sending in large and useless quantities of medicine, how he is to be remunerated, but by being paid for his attendances. I will hand you the bill, which you will please to inspect; and, from the evidence given, you will say whether you consider this to be a fair and just demand or not, and give a verdict accordingly.

The jury, after a few minutes' consideration, returned a verdict for the plaintiff, damages £7 0 6, and costs.

The following is a copy of that part of the bill which was objected to by the defendant:

July 19.	The mixture	}	£5 5 0.
	The pills		
	The lotion		
20.	The pills.		
	The two draughts		
21.	Visit		
22.	Visit		
22.	The box of pills		
	The lotion		
23.	Visit		
24.	Visit		
	The draught		
25.	Visit		
26.	The box of pills		
	The draught		
27.	Visit		
28.	Visit		
28.	The lotion		
30.	The box of pills		
31.	Visit		
Aug. 2.	The draughts		
	The box of pills		
4.	The draughts		
5.	Visit		
6.	Visit		
8.	The box of pills		
	The draughts		
10.	Visit		
	The lotion		
12.	The box of pills		
	The draughts		
15.	Visit		
16.	Visit		
17.	Visit		
Sept. 5.	Visit		
16.	The lotion		

The Medical Society of Louvain have offered a prize of a gold medal for the author of the best Treatise on the General and Comparative Diagnosis of Acute and Chronic Diseases of the Cerebro-spinal System and its Membranes

## BILLS OF MORTALITY.

DISEASES.					
Abscess . . . . .	124	Erysipelas . . . . .	42	Palpitation of the Heart . . . . .	7
Age and Debility . . . . .	3076	Fever . . . . .	1167	Palsy . . . . .	18
Apoplexy . . . . .	429	—, Intermittent, or Ague . . . . .	53	Paralytic . . . . .	185
Asthma . . . . .	1131	—, Typhous . . . . .	103	Pleurisy . . . . .	21
Bedridden . . . . .	2	Fistula . . . . .	7	Rheumatism . . . . .	45
Bile . . . . .	11	Flux . . . . .	4	Scrofula . . . . .	6
Cancer . . . . .	94	Grief . . . . .	5	Small-pox . . . . .	736
Childbirth . . . . .	264	Gout . . . . .	33	Sore Throat, or Quinsy . . . . .	28
Consumption . . . . .	5251	Hemorrhage . . . . .	38	Spasm . . . . .	51
Contraction of the Heart . . . . .	9	Hernia . . . . .	26	Stillborn . . . . .	933
Convulsions . . . . .	2761	Hooping Cough . . . . .	633	Stone . . . . .	19
Croup . . . . .	123	Hydrophobia . . . . .	4	Stoppage in the Stomach . . . . .	24
Diabetes . . . . .	3	Inflammation . . . . .	2385	Stricture . . . . .	4
Diarrhœa . . . . .	31	Inflammation of the Liver . . . . .	197	Suddenly . . . . .	196
Dropsy . . . . .	1021	Insanity . . . . .	258	Teething . . . . .	541
— on the Brain . . . . .	85	Jaundice . . . . .	32	Thrush . . . . .	82
— on the Chest . . . . .	106	Jaw-locked . . . . .	2	Tumor . . . . .	16
Dysentery . . . . .	6	Measles . . . . .	578	Veneral . . . . .	11
Enlargement of the Heart . . . . .	40	Miscarriage . . . . .	8	Worms . . . . .	7
Epilepsy . . . . .	67	Mortification . . . . .	286		
Eruptive Diseases . . . . .	28	Ossification of the Heart . . . . .	16	Total of Diseases . . . . .	23,169

CASUALTIES.					
Broken Limbs . . . . .	2	Fractured . . . . .	1	Overlaid . . . . .	2
Broken Ribs . . . . .	1	Frighted . . . . .	1	Poisoned . . . . .	7
Burnt . . . . .	53	Frozen . . . . .	2	Run over . . . . .	4
Choked . . . . .	1	Killed by Falls and other	75	Scalded . . . . .	2
Drowned . . . . .	136	Accidents . . . . .	1	Strangled . . . . .	1
Excessive Drinking . . . . .	3	Killed by Fighting . . . . .	35	Suffocated . . . . .	10
Executed* . . . . .	8	Killed themselves . . . . .	4		
Found dead . . . . .	6	Murdered . . . . .	4	Total of Casualties . . . . .	335
Christened { Males . . . . . 13,674 }		In all, 27,028	Buried { Males . . . . . 12,015 }		In all, 23,524
{ Females 13,354 }			{ Females 11,509 }		

		Whereof have died,			
Under two years of age	6710	Thirty and forty . . . . .	1902	Eighty and ninety . . . . .	749
Between two and five . . . . .	2347	Forty and fifty . . . . .	2392	Ninety and one hundred . . . . .	95
Five and ten . . . . .	1019	Fifty and sixty . . . . .	2394	One hundred and one . . . . .	1
Ten and twenty . . . . .	949	Sixty and seventy . . . . .	2158	One hundred and eight . . . . .	2
Twenty and thirty . . . . .	1563	Seventy and eighty . . . . .	1843		

Increased in the Burials reported this year, 1,815.

\* There have been executed within the Bills of Mortality, 26; of which number, only 8 have been reported as such.

## MONTHLY LIST OF MEDICAL BOOKS.

[Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]

Anatomy of the Brain and its Membranes, the Nerves, Organs of Sense, Arteries, Veins, and Lymphatics. Arranged in eight Tables. For the use of Students.—Burgess and Hill, 1830.

The anatomical student will find these tables very useful and convenient for reference.

A Letter to the Public on the Necessity of Anatomical Pursuits; with Reference to Popular Prejudices, and to the Principles on which Legislative Interference in these Matters ought to proceed. By COADEN THOMPSON, M.D.—8vo. pp. 92. J. Taylor, 1830.

Practical Remarks on Amputations, Fractures, and Strictures of the Urethra. By STEPHEN LOVE HAMMICK, Surgeon Extraordinary to the King, &c.—8vo. pp. 266. Longman, 1830.

A Treatise on Fever. By SOUTHWOOD SMITH, M.D. Physician to the London Fever Hospital.—8vo. pp. 436. Longman, 1830.

Clinical Illustrations of Fever; comprising a Report of the Cases treated at the London Fever Hospital, 1828, 1829. By ALEXANDER TWEEDIE, M.D. Physician to the Fever Hospital, &c.—8vo. pp. 204. Whittaker and Co. 1830.

**Medico-Chirurgical Transactions. Vol. XV. Part II. Plates.**

A Synoptical, Meteorological, and Symptomatological Journal, or Medical Case-book of Record; containing Prescription Book and Ledger, thus affording also the most economical, accurate, easy, expeditious and efficient Mode of Medical Book-keeping hitherto invented, and indispensably requisite for all who are engaged in the Practice of Medicine and Surgery, in Hospitals, Dispensaries, or Private Practice, &c. By W. R. RUSSEL WILTON, Surgeon, &c.—Longman, 1829.

The plan of this medical case-book is good; and if practitioners will take advantage of the facilities it offers to record the history and treatment of important cases, much benefit must accrue to the science of medicine in general.

A Synoptical Chart of Diseases of the Ear; showing their Order, Classification, Seat, Symptoms, Causes, and Treatment. By J. H. CURTIS, Esq. Surgeon Aurist to his Majesty, &c.—Highley, London.

**METEOROLOGICAL JOURNAL,**

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

December	Moon	Rain gauge.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 a.m.	max.	min.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	2 p.m.	10 p.m.
			9 a.m.	max.	min.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	2 p.m.	10 p.m.
20			33	36	27	29.73	29.77	67	67	NE	NE	Foggy	Fine	Fine
21			30	33	28	.80	.79	67	70	NW	W	Snow	Fine	Fine
22			33	34	24	.69	.62	70	65	ENE	E	F. & Sn.	Cloudy	Fine
23			30	33	25	.62	.55	65	66	NE	NE	Foggy	Cloudy	Foggy
24			27	32	22	.61	.73	67	67	NE	NE	Snow	Fine	Fine
25			24	30	25	.86	30.00	66	64	NE	NE	Fine	Snow	Snow
26			26	26	24	30.21	.22	64	64	ENE	NNE	Fine	Fine	Cloudy
27			28	28	19	.21	.20	65	65	NE	NE	Foggy	Foggy	Fine
28			22	28	21	.20	.15	65	66	N	NNE	Cloudy	Snow	Snow
29			24	27	24	.23	.2	65	67	SE	NE	—	—	Snow
30			27	31	27	.31	.31	67	67	ENE	NE	—	Fine	Fine
31			31	32	29	.40	.44	66	66	E	E	—	Cloudy	Cloudy
Jan. 1			32	34	30	.50	.47	66	67	NE	NE	—	Foggy	Cloudy
2			32	34	32	.38	.37	67	67	N	ENE	—	Fine	Cloudy
3			34	35	33	.29	.18	69	69	ENE	N	Rain	Cloudy	Cloudy
4			36	37	35	.14	.14	70	72	NNE	NE	Rain	Sleet	Sleet
5			37	39	30	.12	.18	72	72	N	NNW	Foggy	Foggy	Fine
6			32	34	32	.19	.02	72	73	NNW	ENE	—	Fine	—
7			38	42	33	29.93	29.80	73	69	W	N	Show'ry	Cloudy	Cloudy
8			35	38	32	.94	30.01	67	68	N	N	Show'ry	Cloudy	Fine
9			34	39	30	30.05	29.83	70	70	N	WNW	Foggy	Fine	Cloudy
10			33	39	32	.92	.65	68	63	NW	NW	Fine	—	Fine
11			35	35	32	.57	.51	60	65	NNW	N	—	Snow	Snow
12			32	33	30	.70	.64	65	67	NNE	N NE	Snow	Cloudy	Cloudy
13			32	32	26	.77	.65	67	67	NNE	ESE	Foggy	Snow	Cloudy
14			28	32	28	.78	.81	65	67	ENE	E	—	Cloudy	Cloudy
15			32	34	27	.79	.76	67	67	E	E	—	—	Sleet
16			29	32	22	.79	.82	67	67	E	SE	—	—	Fine
17			24	36	19	.82	.84	66	65	NE	NE	Fine	Fine	—
18			19	23	17	.85	.70	65	66	ESE	SSW	Foggy	Foggy	—
19			20	31	20	.55	.40	66	69	SSW	SE	—	Foggy	Cloudy

In consequence of the late frost, the Rain cannot be ascertained.

**NOTICE TO CORRESPONDENTS.**

Dr. H. is mistaken in his conjecture.

London College

THE LONDON  
Medical and Physical Journal.

NO 373, VOL LXIII.]

MARCH 1830.

[NO 45, *New Series*.]

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long but an invaluable series.—*Rush*.

ORIGINAL PAPERS, AND CASES,  
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER  
AUTHENTIC SOURCES.

BLOODLETTING.

*Observations on Bloodletting.* By G. O. HEMING, Esq.  
Member of the Royal College of Surgeons. (In a letter  
to Mr. NORTH.)

SIR: Observing that you are engaged in the review of Dr. MARSHALL HALL's work upon the Effects of Loss of Blood, I beg to present you with the results of my experience on this subject, subsequent to the date of a paper which was inserted in the *Medical Gazette*, Number 93, for September 12th, 1829.

The whole of my recent trials perfectly confirm the observations of Dr. Hall, and the remarks I made in the paper to which I have alluded; and I know of no observations in the whole circle of physic of such practical importance.

I find it difficult to state whether the fact of tolerance or intolerance of loss of blood, is most useful as a guide to the diagnosis or to the treatment of disease: in both these points of view, this fact is now become indispensable to me in all cases really or apparently requiring the use of the lancet.

If I were permitted to know *but one* fact of a case, indeed, and compelled to be ignorant of all others, the fact which I would prefer to know would certainly be the degree of tolerance or intolerance of loss of blood.

Now, this fact is at once determined most accurately, by  
No. 373.—No. 45, *New Series*.

the simple plan of placing a patient erect, and bleeding from a good-sized orifice, making all due allowances for nervousness in the patient, or defective manner of taking the blood, &c.

This fact is, I venture to assert, the best, the most useful guide, to the diagnosis, and in the treatment of acute diseases. In one case of affection of the head, there appeared to be every symptom of inflammation. I bled my patient, a female twenty-four years old, and she fainted on losing eight ounces of blood. It was therefore plain that the case was *not* inflammation. I treated it by other remedies, and my patient recovered most favorably. This distinction between inflammation and irritation is one of the most important which we owe to Dr. Hall; and this mode of establishing the distinction is most simple and satisfactory. In another case, resembling peritonitis, there was a difference of opinion as to the nature of the disease. I proposed to determine it by ascertaining the degree of tolerance or intolerance of the loss of blood. The patient bore to lose a large quantity, flowing well from the vein, without syncope. The case was thenceforth considered and treated as inflammation, with the same favorable event as the former one. Indeed, nothing can be more satisfactory than this mode of proceeding.

I shall first give a list of the cases, the detail of which I propose to lay before your readers. In this manner an interesting *coup d'œil* will be presented of the remarkable phenomena of tolerance, and of intolerance, of loss of blood.

I. *Acute rheumatism*; æt. thirty, very strong; *blood lost, fifty-two and fifty-six ounces.*

II. *Pneumonia*; æt. twenty-one, not strong; *thirty-six and thirty-four ounces.*

III. *Phrenitis*; æt. ten; *eighteen ounces.*

IV. *Pneumonia*; æt. five; *seventeen ounces.*

V. *Pleuritis and tracheitis*; æt. six; *ten ounces.*

VI. *Affection of the head, not inflammation*; æt. twenty-four; *seven ounces.*

VII. *Ditto*: æt. twenty; *seven and a half, and nine ounces.*

VIII. *Hysteria*; æt. nineteen; *ten ounces.*

Case I. was that of a very strong man, and, till the present attack, his health had been always very good; he had been suffering four days with acute rheumatism when I first saw him; he was bled to fifty-two ounces, but this

produced no effect on the disease, nor did it cause the slightest approach to syncope, although so large a quantity was taken. Two days after this, his pain was still very acute, and he was again bled. This time fifty-six ounces were abstracted, and he fainted. The fainting was succeeded by slight convulsions, and afterwards delirium came on, which lasted about two hours. Notwithstanding he had lost so much blood, he experienced no unpleasant symptoms from the bleeding after the first three hours: his pain left him, and did not return, and he soon regained his usual state of health.

Case II. This young man was by no means strong. He was bled forty-eight hours from the commencement of the pain, and was greatly relieved at each bloodletting. He had such symptoms as left no doubt upon my mind that it was a case of pneumonia.

Case III. was a most aggravated case of phrenitis. I had been, three weeks previous to this attack, attending this little girl with acute anasarca, succeeding to scarlet fever: her symptoms were then a slight swelling of the hands, feet, face, and other parts of the body; the pulse was 120; the tongue clean, with its papillæ, particularly at the end, much raised; there was a small superficial ulcer upon each tonsil; her urine was scanty, and her bowels, unless she took opening medicine, were confined. From this state she appeared to be recovering by taking active purgatives, when she was one night suddenly seized with vomiting and violent pain in the head; but it was not till the following morning that I saw her, and I was then told that she had been found on that morning quite insensible, occasionally vomiting. She attempted to speak upon being raised, but could not articulate so that I could understand what she would have said; her face was very red and swollen; the eyes were red, but the blood-vessels of the left eye (the side on which she was lying,) were much more highly injected than those of the right; her pulse was hard, frequent, and full; her carotid arteries beat violently. She became violently convulsed whilst I stood by her, and this state was not at all altered till I made a large opening into the jugular vein, and eighteen ounces of blood had flowed rapidly from it. Was no longer convulsed; she spoke, but her talk was that of delirium. Had not the slightest appearance of syncope, for her face and lips were still very red, and her pulse was full and strong. She had leeches applied, and an evaporating lotion to the head, and active

purgatives were given. The delirium continued two or three days, but she eventually recovered. The blood was taken in four cups, the first of which was buffed and cupped, but the other three not at all so.

Case IV. is the case of a child who had had scarlet fever succeeded by anasarca, and subsequently by pneumonia. I had been attending her about a week, without perceiving any symptom which would indicate a local affection, particularly of an acute character, when I was hastily called to see her, and found her propped up in bed, with quick, short, and painful breathing, a violent pain in the right side of the chest, and some tenderness in the region of the liver, but the pain was referred to a part higher up; there was a distressing dry cough; her pulse was very frequent and hard; her belly was slightly swollen, as well as her hands and feet; her urine was scanty and high-coloured, and her bowels were usually confined, unless acted upon by aperients. There had been slight difficulty of breathing the preceding day, with some pain in the side.

I thought this was a decided case of pneumonia, and that the liver was also inflamed. Her friends were told that it would be necessary to take away a *large* quantity of blood, as the only measure at all likely to afford her relief. As the blood flowed, her breathing became more and more relieved, till she could breathe with perfect ease. She lost seventeen ounces of blood without fainting. Her mother thought her almost well, she had derived so much benefit from the remedy.

I saw her at twelve o'clock the next day: she was breathing almost naturally, her pulse was not so frequent, she had no pain, and she was eating, with an apparent appetite, some baked potatoes and gravy, which her mother had imprudently given to her. In the evening of this day I was told (for I could not see her,) that her pain returned, her breathing became difficult and distressing, and these symptoms continued and increased till she died, at twelve o'clock the next day.

There were no symptoms subsequent to the bleeding that would lead me to suppose that she suffered in the least degree from the loss of blood.

The examination of the body, which took place twenty-four hours after death, was an interesting one, and I conducted it with great care and attention.

In the abdominal cavity was contained about four ounces of a transparent and slightly green fluid, in which were floating shreds of coagulable lymph. The intestines and

stomach were of a natural colour, but the mucous membrane of the latter, in several places of the cardiac portion, was perforated, so that, upon holding it up to the light, it was perceived that its peritoneal coat alone kept in its contents, consisting of a small quantity of a darkish fluid, and some half-digested potato. There were some parts of the mucous membrane of the stomach redder than others; I believe not indicating disease having existed there, but it seemed such an appearance as the one described by Dr. YELLOWLY, and often found in a healthy state of that organ. It was much distended with air, and so were some portions of the bowels, particularly the transverse arch of the colon. The liver was of a natural structure and colour, but some part of its peritoneal covering was thickened and opaque. The other viscera in this cavity, as well as the pelvic viscera, were perfectly healthy. The abdominal vessels appeared to contain as much blood as I have usually found.

The thoracic viscera evinced extensive traces of disease. There was in the right cavity of the chest a small teacupful of fluid, similar to that in the abdomen, but more loaded with shreds and flakes of coagulable lymph. The left cavity contained rather more than half this quantity, but of the same character. Two thirds of the lower part of the right lung were hepatized; the pleura pulmonalis covering this part was beautifully injected with blood of a florid colour, and over it was spread a thin layer of lymph, of a light yellow colour, and attached in some places by shreds to the pleura costalis. These adhesions were evidently of recent date, as I could break them, so tender were they, by throwing a strong stream of water on them. Half the left lung appeared hepatized, but the pleura covering it was neither injected, as in the right lung, nor covered by lymph. Portions of the right lung sank in water, but it was not so with the left. There were hypertrophy and considerable enlargement of both the right and left ventricles of the heart; the auricles were also much dilated; the pericardium contained about half an ounce of fluid.

The brain was rather pale, but not more so than I have seen in some cases where no blood had been lost. There was a slight effusion between the pia mater and tunica arachnoides, and the latter membrane was in some parts rather opaque, so as to give the fluid seen through it somewhat of a milky appearance.

The subject of Case V. was a little boy, who had had measles; and it was on the fourth day from the commence-



ment of the eruption that he was seized with tracheitis and pleuritis. I would merely observe here, that I think it is at this period that children with measles are more particularly liable to such inflammatory affections.

Case VI. was the case of a young woman suffering with violent pain in the front part of the head. When I saw her, she had been ill two days; her skin was exceedingly hot, her pulse 120, her tongue was œdematous and furred, and her breath fetid; there was delirium, with great aversion to light and noise: the latter was particularly distressing to her. I found that she had been subject to such attacks, but not always attended with pain in the head: sometimes the chest was the seat of pain, and at others the region of the liver. In all the former attacks, she told me that the alvine evacuations were "lumpy and dark coloured," and that the application of a few leeches, with opening medicine, either soon cured the pain, or caused it to move from one of those places already mentioned to the other. She was informed by her medical attendant that she had had inflammation of those various parts; and I recollect the time when I should have told her the same thing. Complete syncope was produced by the abstraction of seven ounces of blood, with little permanent relief to the pain; she, however, was much relieved when her bowels had been copiously acted upon.

Case VII. was precisely like the one I have just stated; and it will be observed that the loss of nearly the same quantity of blood produced fainting. Both these young women had exerted themselves more, and experienced more fatigue, the day before the attack, than what they had been accustomed to; and this circumstance may probably be considered as the immediate exciting cause of their illness.\*

The case of hysteria, Case VIII., occurred in a young woman of a remarkable strong constitution, and she fainted at the loss of ten ounces of blood. I will just remark, that she was not bled during the hysterical paroxysm, but about two hours after one of these attacks.

I must here again insist upon the distinction between these inflammatory and non-inflammatory cases. The patient, Case VI. had had her attacks so repeatedly, that disorganization must have taken place, had they been

\* I think no one can contrast these two cases with No. I. without being forcibly struck with the great difference as respects the susceptibility to the effect of loss of blood which these two different diseases had produced in each patient.

of the nature of inflammation. Dr. GOOCH speaks of the irritable uterus; Sir ASTLEY COOPER of the irritable breast; and Mr. BRODIE of hysteria of the joints: all founding their opinions on this very circumstance. Dr. Hall has described similar affections of the head, chest, and abdomen, and has pointed out their distinctive characters of intolerance of loss of blood; and I have thus added my testimony to the truth of this author's very useful observations. These affections, however protracted, have no tendency to run into inflammation, so distinct are they from beginning to end. They do not bear the loss of blood. They are denoted by more urgent symptoms: the irritable brain by acute pain and intolerance of light; the irritable abdomen by acuter pain, but not so much tenderness.

P. S. I remark two observations in confirmation of these views, in two recent Numbers of the *Lancet*, by Dr. ALISON and Dr. ELLIOTTSON. The former observes of a patient affected with pneumonia and pleuritis, "He had been bled to forty-six ounces, which, perhaps, in a young patient might be the average quantity necessary to subdue pneumonia;" and of the use of bloodletting in certain cases of painful dyspepsia,—“the quantity of blood generally necessary to be drawn is not great: he (Dr. A.) had known relief usually to follow the loss of twelve ounces; and Dr. Wilson Philip states the same.”\* Dr. Elliottson, speaking of a patient affected with peritonitis, says, “I had him bled to syncope, and thirty-two ounces of blood were abstracted before he fainted.”† Indeed, such observations are incidentally made, continually, in medical writings.

#### COUNTER-IRRITANTS.

*A few Practical Remarks on Counter-Irritants, and their Effects as Remedial Agents.* By ANTHONY TODD THOMSON, M.D. &c.

COUNTER-IRRITANTS comprehend various species of remedial agents, many of which have been known and employed from a very early period. They are intended to relieve deep-seated local affections, and also local symptoms of general affections, by exciting certain impressions on the surface of the body. Whether they operate by producing a conversion of disease, or rather by exciting a new diseased action, so that that which already existed is suspended or

\* *Lancet*, No. 335, p. 595.

† *Ibid.* No. 336, p. 624.

destroyed, on the principle that two diseases cannot be present in the body at the same time? or whether the benefit derived from them depends on a change in the local momentum of the blood? are questions which it is not my intention, at present, to examine. My object, in this paper, is to lay before the profession some results of my experience of the advantages to be expected from the application of counter-irritants, in diseases which have, in almost every instance as far as my information extends, proved fatal. Before proceeding, however, with the detail of these cases, I may, perhaps, be permitted to offer a few remarks upon the effects of counter-irritants on the parts to which they are applied, and the comparative advantages to be expected from the different kinds of counter-irritants that have been employed.

Under the term counter-irritants are included four varieties of external applications: *rubefacients*, *vesicants*, *pustulants* (if I may be allowed to employ such an expression), and *caustics*.

The substances comprehended under the term *rubefacients*, I need hardly remark, produce an increased action, or temporary inflammation, in the superficial vessels of the part to which they are applied, attended by a sensation of heat, and generally of pain. They have been found useful in relieving local pains, when no organic derangement is supposed to exist; but their application, in some painful affections, such as acute rheumatism and gout, when much general febrile excitement is present, has occasionally been followed by fatal metastasis.

*Vesicants* have been found more extensively useful than rubefacients, in the same range of diseases; and, whatever may be the cause, their application in acute affections has been less frequently followed by metastasis, than when rubefacients have been used. From the large quantity of serum which is thrown out between the cutis vera and the cuticle during the operation of a vesicant, there is little doubt that the increased action which they excite extends beyond the superficial vessels of the part to which they are applied; and, thence, their curative effects are more certain than those of rubefacients; but why they are less frequently followed by metastasis, is not so readily explained.\*

\* If I might hazard an opinion, I should say that it is owing to the more complete, and consequently more permanent, impression made by blisters; whereas the impression made by rubefacients is transitory, and although it, as it were, unsettles the internal disease, yet, its influence rapidly passing away,

Under *pustulants*, I include those substances, the application of which to the skin is followed by suppurating phlegmons, or pustules. The best known of these substances is the Tartar-emetic ointment. I have employed it for several years in many cases, and have never seen it followed by metastasis, or by other untoward circumstances. But it is slow in producing its effects; and, thence, is less calculated for acute cases of disease than vesicants. Without stopping to examine the correctness of the opinion of some continental physicians, that it acts in relieving pulmonary inflammations, by some specific and direct action on the lungs, independent of its operation as a counter-irritant, I may state that my observations induce me to recommend it as peculiarly adapted for phthisical cases, when there is reason to believe that ulceration has not yet taken place.\*

The fourth kind of counter-irritants, *caustics*, operate by destroying the life of the skin to which they are applied, producing a slough which separates and is thrown off from the surrounding living parts, and which leaves behind it a suppurating sore, that may be kept discharging for a considerable time, by the application of irritating substances to the raw surface.

These are the most powerful description of counter-irritants, the most permanent in their effects, and I may venture to assert, those on which the practitioner may place some reliance for the relief of deep-seated pains, even when connected with organic affections.

There are two species of caustics, the *actual cautery*, which destroys the part to which it is applied by the sudden excitement of an action in it greater than its vitality can sustain; and the *potential cautery*, which comprehends chemical substances that destroy the part to which they are applied by breaking those affinities between the components of the living solid which are maintained by its vitality, and producing new, which are incompatible with its living state. I have selected the three following cases which I am about to describe, as illustrative of both species of caustic counter-irritants.

CASE I. J. S—, ætatis forty, a watchman, was ad-

the diseased action is left to fall upon any other part of the system. I am aware of the mechanical nature of this explanation; but I cannot conceive any other that so readily explains these effects of vesicants.

\* When a quicker effect is required, I have found the following ointment adequate to the production of pustules: R. Acidi Sulph. F. ℥ss.; Acidi Acetici fort. ℥ss.; Ung. Cetacei ℥ss. tere optime; mag. glandis thoraci nocte manente applie.

mitted a patient at the Chelsea and Brompton Dispensary. His disease was a large fungous tumor, which protruded from under the lower edge of the greater pectoral muscle of the right side. It had penetrated the skin by ulceration; and, at the time of his admission at the Dispensary, it presented the aspect of a lobulated tumor, of a dark red or purple colour, about the size of the fist of a full-grown man, compressible, and bleeding on being slightly handled. It appeared to extend upwards beneath the muscle, and to take its origin, by a narrow neck, from the clavicle, or from some part near that bone. There was also another tumor, about the size of a large walnut, seated in the side of the thorax, two inches below the axilla: this had not penetrated the skin, but caused considerable pain when it was touched or pressed by the arm. The man was in an emaciated condition; his countenance expressive of great anxiety and suffering, and his complexion displaying that sallow hue which is almost pathognomonic of cancer. The tongue was furred; the pulse quick and irritable; the skin dry and harsh; and the urine scanty, high coloured, and depositing a pinky sediment; whilst the bowels were in the most irregular state. The patient enjoyed little sleep, owing to a diurnal fever that made its attack in the evening, and terminated in profuse sweating in the morning. He had been unable to perform his duties as a watchman, for some weeks before he applied at the Dispensary.

In tracing the history of this disease, he informed me that the tumor commenced about two years before, when he was a soldier. That it first attracted his attention when it was about the size of a hazelnut; that, as it slowly increased, extending downwards, it raised the pectoral muscle; but he did not apply to the regimental surgeon as long as he was able to perform his duty, which was the case until the skin began to ulcerate and the tumor to protrude from beneath the edge of the muscle. He was then sent to the hospital at Chatham, where the tumor was partially extirpated; but he suffered greatly from the hemorrhage that followed the operation; and, as soon as the wound healed, he was discharged from the service, and admitted an out-pensioner of Chelsea hospital. Before this time, however, the tumor had again considerably enlarged, and it had again penetrated the skin at the time he commenced the office of a watchman.

The examination of the tumor convinced me, that it was of that species which has been termed *Fungous Hæmatodes*; being, as I have already stated, irregularly lobulated, or of a cauliflower form, of a deep red colour, spongy, bleeding

freely when slightly touched, and excreting a thin acrid fluid, which excoriated the surrounding sound skin.

To use the knife again was out of the question; I resolved, therefore, to destroy the tumor by the actual cautery; but, before determining finally on that method of proceeding, I sent the patient to my friend Mr. CURTIS, who approved of my proposal to destroy it by the cautery; and the man having agreed also to the operation, it was performed the next morning, in the following manner. Four folds of thick brown packing paper, cut into a circular shape, of a size sufficient to cover the whole of the pectoral muscle and part of the side of the body, with a hole in the centre, exactly the size and form of the tumor, were soaked in water, and afterwards pressed so as to squeeze out all the superfluous fluid. This cool cover was fixed over the seat of the disease by two turns of a roller, which went round the body, the tumor only being exposed; and an iron spatula, such as is usually employed for spreading plasters, heated to whiteness, was applied with considerable pressure over the whole surface of the tumor. The hot iron was held on the part longer than a minute; but the pain was so supportable, that the patient, on being questioned how long he could have borne it, replied five minutes.

He walked home after the operation, which, as might be expected, was not followed by any bleeding; and in the evening he poulticed the cauterized part, as he had been directed. In less than twenty-four hours, the slough began to separate, and, in three days, the whole of the tumor seemed, as it were, to dissolve away from its origin, which led me to hope that it was completely destroyed. Much constitutional derangement accompanied this process, and the free administration of bark, sulphuric acid, opium, and wine, was requisite to prevent the patient from sinking under it. In three weeks his general health was restored, and the wound was healed in another week. So completely, indeed, had every vestige of the tumor disappeared, that I exhibited the patient at a meeting of the Medico-Chirurgical Society, as an instance of *Fungous Hematodes* cured by the use of the actual cautery.

The smaller tumor, in the axilla, was now extirpated by the knife; and the man returned to the performance of his duties as a watchman.

Six months afterwards, this patient again presented himself at the dispensary, the tumor having once more showed itself under the pectoral muscle. At this time it was about the size of a small apple, and pushed forward the muscle under which it was seated, but without any approach to

ulceration in the integuments. I now determined to try the power of the cautery as a counter-irritant; and, with that intention, applied a smaller iron than that which was used on the former occasion over the tumefied part of the muscle, with a degree of pressure not more than sufficient to produce a slough penetrating very little deeper than the cuticle. The result exceeded my expectations: the tumor in a few days appeared considerably diminished; and by repeating the cauterization twice in the space of twelve days, it almost disappeared.\*

In this manner, by the occasional use of the cautery, the tumor was kept of a very small size for the space of twenty months, during which period the man enjoyed excellent health, and was capable of performing his duties as a watchman. Some domestic troubles, the illness of his wife, and a habit of drinking into which he had fallen, prevented him from coming to me for some months; and, when I again saw him, the tumor was beginning to reappear under the edge of the muscle, and ulceration of the skin had already commenced.

As I could not apply the cautery on that day, he was directed to return on the following; but I saw him no more until he was on his deathbed, eleven months afterwards, when his wife called and requested me to see him. The poor man died in less than a week afterwards. I was informed by his wife that he had put himself under the care of some quack, who promised him a speedy cure without the use of the cautery; and that a sense of shame, on finding he had been duped, prevented him from again applying to me, until the disease had undermined the powers of his constitution, and he was sensible of his approaching dissolution.

On dissecting out the tumor, after the death of the patient, it was found to originate, as I had anticipated, from the under part of the clavicle, and to stretch down between the pectoralis major and minor muscles. No corresponding internal disease was found in this case, although it has been frequently observed in cases of *Fungus Hæmatodes*, except a small warty tumor on the pleura costalis, immediately under the seat of the tumor. This, had the life of the patient been longer preserved, might have increased and propagated the disease in the cavity of the thorax.

In remarking on this case, it may be justly said that there was no novelty in the application of the actual cautery to the fungus; for, although this remedy had long been dis-

\* In all these applications of the hot iron, the parts were protected from radiation by the moistened paper.

used in England, yet it is of great antiquity, having been used by Hippocrates, Celsus, Albucasis, and other ancients, and more recently, in similar affections, by Pouteau, Percy, Larrey, and Maunoir, on the continent. I am not aware, however, of any instance on record in which the cautery was employed as a counter-irritant, in the manner in which I have described; and I trust I am not mistaken in supposing that the knowledge of this fact may lead to very important improvements in practice, although I have no satisfactory rationale of the operation to offer. That the same beneficial effects would result from the application of the mineral caustic, is not impossible; but I am inclined to think that its power is much less efficacious: and I infer this from the instantaneous and very powerful effect produced on the application of a whitehot iron to the skin, and the rapid separation of the slough. Pure Potassa does not act so immediately, and the slough requires at least four times the period to separate. The mineral acids and other caustics are equally slow in their effects. Moxa has been much used on the continent, instead of the hot iron, from the idea that it is a less barbarous application; but I am inclined to think that any individual who would submit to a trial of the two remedies, provided that the iron be applied when it is at a white heat, and the effects of the radiated heat be guarded against by the method I have described, would not hesitate to prefer the hot iron to the moxa. The death of the part is instantaneous, and the influence of the caloric not being felt beyond the spot which the iron touches, no more inflammation is excited than is requisite for the separation of the slough. I have had frequent opportunities of employing the actual cautery as a counter-irritant, since the occurrence of this case; and, even when women were the subjects of the operation, the application of the iron has been submitted to a second, a third, and a fourth time, without any hesitation.

CASE II. About two years ago, I was requested to see the Rev. Mr. W—, a clergyman of the church of England, ætatis sixty-eight. He had been ill for upwards of a year previous to my advice being requested, and was confined to his sofa, under the impression that the spine was affected. In tracing the history of the attack, I found that, several years before the commencement of the disease under which he was labouring, he had been thrown from his horse; that the symptoms of his disease soon afterwards appeared, and had slowly but progressively advanced. He complained of



numbness in the upper extremities, with the sensation of great tightness across the chest; the lower extremities also were less under control than usual; and the bowels were so torpid, that evacuations were procured only by artificial means. Daily, after dinner, the hands became hot, and at length burning; the breathing a little oppressed; and the susceptibility of touch so sensitive, that moderate friction with gently stimulant embrocations could not be endured. His intellect was entire, although occasionally some degree of fulness and throbbing were felt in the temples. He slept well, and his appetite, although irregular, was moderate. No means that could be devised had yet succeeded in promoting perspiration.

On examining the state of the vertebral column with close attention, I could not perceive the smallest indication of disease in that chain of bones, and consequently extended my inquiries as to the state of the medulla and its membranes. The result of these was a conviction that there was some affection of the cord: either that state which the French have termed *ramollissement*, or a thickening of the theca. In the event of either state being the cause of the symptoms under which Mr. W. was labouring, it was evident that no necessity existed for confining him to the horizontal position: he was therefore desired to sit up as much as his strength would permit him; to take gentle exercise, with the aid of a crutch or the arm of another person; for a long confinement to the horizontal position had so debilitated his frame, that he could scarcely sustain the upright position for half an hour at a time. His bowels were attended to, and the secretions corrected by a mild alterative course of medicine; and this, in conjunction with gentle tonics, was continued until the tone of the frame was restored, the appetite improved, and he could sit up all day.

It is unnecessary to detail the means that were devised at different times to remove this disease; but little permanent benefit was affected until the application of the actual cautery on each side of the vertebral column, in the loins. It was effected by means of a double-headed iron, the heads or buttons being about the size of half-a-crown each, and about three inches asunder. The part being guarded as described in the former case, the iron was heated to whiteness, and applied by my colleague Mr. PATTISON, in such a manner that both buttons acted at the same time. Little pain was experienced, and that was lessened by the application of diluted *Liquor Ammoniz* to the surrounding skin. In forty-eight hours the sloughs separated, and a moderate

discharge was maintained for about six weeks, after which the ulcers were allowed to heal.

The change that followed the use of the cautery in this case was soon very apparent. No medicine was given, except to regulate the bowels; and although he is still weak, and complains of some degree of numbness of the upper extremities, yet he is comparatively well, and is capable of taking walking exercise, in a degree sufficient to preserve his health. Moxas had previously been employed, but without any decided advantage. He has lately removed to Hastings for the benefit of a mild climate during the winter months.

CASE III. R. M—, esq. a merchant in Liverpool, ætatis thirty-four, had occasionally consulted me by letter, previous to the 3d of January, 1812, when he came to London, and placed himself under my care. Being a relation of my wife, I received him into my house; and, consequently, had many opportunities of closely watching both the symptoms of his disease and the effects of the remedies employed to relieve them.

Mr. M.'s state of health previous to his arrival in London had afforded a strong suspicion that the kidneys, or rather one of them, contained calculous matter, sufficient to excite a great degree of irritation in the viscus. He suffered from continual pain in the loins, accompanied with profuse perspiration, and the urine deposited a large quantity of ropy mucus. Mr. CLINE, whom he had, also, consulted, when he was in London, in the spring of 1810, was of the same opinion as myself respecting the state of the kidney; and the plan he recommended was to soothe the general habit, and thus, by allaying irritation, to allow nature the opportunity to restore the healthy secretion of the urine. He advised, with this view, a temperate diet, bland demulcent drink, the avoiding wine and all other causes of excitement; and, for medicine, large doses of powder of Sarsaparilla, with carbonate of soda, and at the same time the tartrate of iron, with extract of Sarsaparilla, to be taken in moderate doses. This plan was pursued until half an ounce of Subcarbonate of Soda, and four drachms and a half of the powder of Sarsaparilla, were daily swallowed, but with no evident advantage: on the contrary, the unfavorable symptoms increased; and, when Mr. M. arrived in London, a swelling had appeared in the region of the kidney, protruding forwards, and occasioning an evident external tumor in the right hypochondrium.

It is unnecessary to detail the various plans which were adopted for the relief of Mr. M. During the four months which he remained with me, he had seen Dr. BAILLIE, who, as well as Mr. CLINE, objected to the introduction of caustics on the loins, which I had more than once suggested. He returned, therefore, to Liverpool, with the tumor in the region of the kidney rather larger than when he arrived in town. In this state he continued for several months, until, having been thrown from his horse, and fallen on the affected side upon a large stone, the tumor became so painful, and increased so rapidly in size, that he returned to London, and consented to the use of the caustics. As my plan, however, had been objected to both by Mr. Cline and Dr. Baillie, I urged Mr. M., before it was commenced, to see Dr. HENRY AINSLIE, who was requested to meet me in consultation on the 28th of September. On examining the tumor, which was now apparently as large as a man's head, Dr. Ainslie agreed with me that it was an enlarged kidney, and that the employment of counter-irritants, in the manner I had suggested, afforded the best prospect of relief; while, at the same time, he recommended the administration of iron and bitters, with the view of keeping up the general strength, which was much reduced, and restoring the tone of the diseased organ.

Two large caustics, composed of the Pure Potassa, were now applied upon the loins, about five inches in length and one in breadth; and, as soon as these were in a state to receive a pledget of lint smeared with Savine ointment, two others were opened; and in this manner the whole right side, from the spine to the umbilicus, was successively treated; four issues being always open at one time, two discharging freely, and two in a state of preparation. As soon as the first issues were formed in the loins, the most evident benefit was experienced: the pain and uneasiness in the region of the kidney diminished; the nocturnal perspirations ceased, and the febrile sensation of fatigue on rising in the morning was soon removed. The deposition of mucus in the urine, however, still continued to be very copious; and although the odour of that secretion, and its colour, which had been previously very unnatural, were improving, yet little ground was gained in this respect for many weeks. The tonics had been discontinued; and, on Dr. Baillie being again consulted, he now approved of the caustics; and recommended the perineum also to be blistered, under the idea that the prostate gland was in a state of disease, and the chief source of the ropy, mucous

deposition in the urine. He also recommended a scruple of alum and four grains of extract of opium to be taken daily.

Much benefit was derived from this change in the plan of treatment; and when Mr. M. left London for Liverpool, towards the end of the summer, the tumor was reduced to nearly one half the size it was before the caustics were applied; his general health was greatly improved, and the urine was nearly free of mucus.

In a few months the issues were healed; and I saw nothing of Mr. M. until the spring of 1817, when he again came to London, the tumor having begun once more to enlarge. When I saw him, it was not so large as when the caustics were first introduced, but it was much larger than when he left me in 1814. The same plan was pursued, with the same beneficial results; and, by a letter dated the 21st of June, 1817, I find that he left me much improved, and that I had given him the following instruction respecting his future management of himself.

“With regard to medicines, I would advise the continuance of those which you have been lately taking, until you find the stomach and bowels act in a more regular and natural manner. If costiveness intervene, the medicines must be omitted for two days, and the bowels be opened with a scruple of Rhubarb. The issues must be kept up for more than a year. Indeed, it is impossible to name any period at which you will be able to do without them; but you must regard them as the sheet-anchor of your hope of recovery, and avoid leaving them off before the kidney be fully reduced. Those which are now open should be closed soon after you get to Liverpool, and two others opened near them, by means of the *Causticum acerinum*; and in this manner they should every now and then be changed, for I place more confidence in the repetition of the counter-irritation which they produce, than in any discharge from them. If you could bring your mind to submit to the actual cautery, it should be tried. I have great expectations of benefit from so powerful an agent. To remove every source of sympathetic irritation in the urinary organs, let a full-sized bougie be passed into the urethra once or twice a month. I cannot commit myself by promising you perfect health by the steady pursuance of this plan; but from the result of the plan as it has already been tried, there is the greatest probability of a near approximation to health.”

Mr. M. did not live to realize these hopes, owing to an

attack of pulmonary inflammation, which proved fatal on the 27th of November, in this year. As his death occurred at Liverpool, I shall give the account of it, and the post-mortem examination, in the words of Dr. TRAILL, who, assisted by Dr. VOSE and Dr. RUTTER, attended him in his last illness.

"The steady perseverance," says Dr. Traill, "in the use of large caustic issues, three of which were constantly kept in an active state, produced a sensible diminution of the size of the tumor; and Mr. M.'s great attention to diet, and regularity of exercise, effected such an amelioration of all his complaints, that his state became comfortable, and promised a progressive improvement.

"Early in November last, after a week of slight indisposition, Mr. M. imprudently exposed himself in a long ride in an open gig. He returned home chilled, and, after ineffectual efforts to regain his natural warmth, retired to bed. When I first saw him, about ten o'clock on the same evening, his respiration was quick and laborious; he complained of a very painful constriction of the chest; his skin was warm and moist, and his pulse soft, small, and 140 in a minute. A large sinapism was immediately applied to the chest, and his feet and legs were wrapped in flannels wet with hot vinegar, in which mustard had been mixed. He took a draught, with Camphor mixture, solution of Acetate of Ammonia, and sweet Spirit of Nitre. At one o'clock the same night, his breathing was a little easier, and he perspired freely.

On November the 17th, at seven A.M., Mr. M. passed the remainder of the night nearly as I left him, and was not sensibly better in the evening. The *Pil. Scillæ cum Calomelane et Ipecacuanhæ* was ordered.

"As it now became an important question whether relief might be afforded by bleeding, I requested a consultation with Dr. Rutter. At nine A.M. from six to eight ounces were ordered to be taken from the chest by cupping. After six ounces were taken, no relief being obtained, and the pulse becoming more feeble, the bleeding was carried no further. A large blister was applied to the chest. In the evening, we found Mr. M. sitting below stairs: he had dressed with very little assistance, and walked from his chamber by himself. His pulse was, however, not improved, and his breathing very little improved from the morning."

The above history of the form of Mr. M.'s present attack will afford such a view of the close of this interesting case

as may supersede the necessity of entering into further details of a progress which, with little variation, terminated fatally on the 27th of November.

In detailing these cases, my chief object is to direct the attention of others to counter-irritation, carried to a greater extent than is customary; and at the same time to describe a mode of applying the actual cautery, which, if generally employed, would set aside many of the objections to its use. Much of the pain arising from the actual cautery, is undoubtedly due to the radiation of the caloric from the hot iron; and, when this is obviated, all the other objections are more imaginary than real. If benefit is to be expected from a counter-irritant, the more powerful the impression, the more likely is it to effect the object intended by its employment; and for this purpose the actual cautery is superior to every other application, independent of the rapidity with which the slough is thrown off, when the operation of an issue is required.

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FUNCTIONAL DISORDERS OF THE SPINAL CORD.

*Observations on Functional Disorders of the Spinal Cord, and their Connexion with Hysterical, Nervous, and other Diseases; illustrated by Cases, selected chiefly from the Reports of the Pallas-Kenry and Currah Dispensaries.*  
By WM. GRIFFIN, M.D. and D. GRIFFIN, M.R.C.S.  
Limerick.

(Continued from page 110.)

THE effects of mental emotion on the heart and arteries, the irregular, or violent, or preternaturally weak, or suspended action which they induce, through the medium of the spinal cord, might have led to the knowledge of a new train of symptoms dependent on irritation. As these are affections of the involuntary muscles, the power of which is supposed to depend on the ganglionic nerves, we were, in our earlier attention to the subject, much perplexed what to attribute to diseased states of the ganglia, and what to the cord. Assuming, from Dr. Philip's experiments, "that the heart is not only as easily stimulated through the brain and spinal marrow as the muscles of voluntary motion are, but that it may be stimulated through them in the newly-dead animal for a considerable time after these muscles can no longer be influenced in this way; proving that the ganglions oppose no obstacle to the influence of the brain and spinal marrow being extended to the muscles of involuntary

motion," we saw no difficulty in concluding that disturbed states of the spinal marrow may produce such affections. We felt, however, that it was highly probable they might equally result from diseased ganglia, and even be accompanied by the tenderness of the corresponding portion of the medulla. However, as our knowledge of the functions of the sympathetic and its ganglions is as yet too obscure to permit any certain inferences, it eventually seemed most prudent to assume as affections of the cord all such as were attended by spinal tenderness, and to give to the ganglia those which evinced no such symptoms. The danger of erroneous conclusions was thus at least limited. There could be no doubt of the influence of the cord on the involuntary muscles, nor that this influence might be excited by irritation of certain portions of it; while it seemed altogether a gratuitous supposition that spinal tenderness is ever induced by diseases of the ganglia. It may be quite true that it is so, but we do not seem to have any proof of it.

We are the more anxious to insist on this point, because it is a matter of no small importance to have any mode of distinguishing between affections of these nervous masses and those of the cord; and in a treatise on this subject which has just come into our hands, written by Mr. Teale, of Leeds,\* it is freely assumed that affections of all parts, whose functions are chiefly dependent on the sympathetic, are the result of disease in the ganglia of that nerve. It seems needless to repeat what Dr. Wilson Philip has so fully explained, that although the stomach, intestines, &c. are wholly dependent upon the ganglionic system for the exercise of their functions, they are strictly subject to the influence of the brain and spinal marrow; and we are hence at a loss to conceive why the spinal tenderness should be mentioned by Mr. Teale as an argument for ganglionic disease, when the most obvious conclusion would be that it indicated an affection of the cord. It seems difficult to explain, too, why, in some cases exhibiting intense symptoms of ganglionic disease, this tenderness should be wholly absent. It may, indeed, be said, with great truth, that many instances of spinal disease occur in which the tenderness is very limited, and nowise proportioned to the symp-

\* Our remote situation from the metropolis precluding the possibility of an early sight of new publications, we have only just received Mr. T. P. Teale's excellent little work on Neuralgic Disease. Although a little surprised to find ourselves so largely anticipated, even to very arrangement, it was no slight gratification to find our views fully confirmed by this gentleman's observations. We have in some instances hesitated in going so far as Mr. Teale did, while in others our investigations have tempted us beyond him.

toms. Of such it is only fair to admit a strong probability that the ganglia are the true seat of the disease.

It appeared from Dr. Philip's experiments, that to produce any powerful effect on the heart and blood-vessels, it was necessary to stimulate a large portion of the brain and spinal marrow. The same fact is observable in the diseases of irritation, as most severe cases of palpitation, syncope, &c. not occasioned by organic disease, are marked by universal tenderness of the spine. We have nevertheless often met with these symptoms connected with tenderness of minute points, especially of the cervical portion; and whether this be owing to a peculiar sensation occasioned at the tender part, and acting on the whole cord, or, in the latter case, to an affection of the pneumo-gastric nerves, which have so considerable a share in forming the cardiac, or finally, to an affection of the cervical ganglia, it is difficult to determine. For illustrations on this subject, instead of extracts from our note-book, we might perhaps refer with more advantage to an essay by Dr. Darwall, of Birmingham, of which we have only been fortunate enough to see an interesting notice. Nothing can be more accurate than his delineation of these affections. We shall only venture to offer two or three cases, commencing with one resulting from the irritation produced in the cervical cord by an injury of the external ear.

XXII. James Casey, a smith, had part of his ear bitten off in a quarrel. The inflammation and soreness was so great that he could not sit up in bed, and, though a strong man, generally fainted when the sore was dressing. This did not excite much surprise at first, as it was attributed to the tenderness of the wound in a peculiarly sensitive habit; but when it began to heal, and all extraordinary soreness had worn away, it seemed very remarkable that he should still continue subject to sudden sinkings or lownesses, closely approaching to syncope. There appeared an extravagant disproportion between the apparent debility or nervous depression, and the trifling nature of the wound. When the lowness came on, he was always terrified by the apprehension of dying, and was obliged instantly to have recourse to wine and stimulants for relief, which, as he had no thirst nor heat of skin, were not forbidden. From the resemblance which these fits bore to the sinkings which are sometimes observed, in hysterical habits, in females after delivery, irritation of the cervical portion of the spinal marrow was suspected. On examination, there was found very great tenderness at the third and fourth cervical ver-



tebræ, particularly acute at the right side. As the wound was now healed; and the disposition to fainting was much less frequent, it was thought unnecessary to institute any local treatment: attention to the bowels, and the volatile tincture of valerian, with camphor mixture, completed the cure.

XXIII. Mrs. —, a lady aged forty-eight, was awoke in the night by a sensation of weight and constriction across the chest; pain at the ensiform cartilage and violent palpitation, followed by fits of sinking or fainting, with apprehension of dying. The palpitation was always brought on to a distressing degree when she chanced to turn on her left side. These symptoms continued to recur for some days, but were very much relieved by mild purgatives and antispasmodics: she was, however, now seized with acute pains in the neck, arms, chest, and sides; and, on examination, there was found tenderness of the first and second cervical vertebræ, and of the seventh or eighth dorsal. All these symptoms readily disappeared on the application of a blister to the latter place; and her usual health was restored by a continuation of the antispasmodics, with tonics. The attack seemed to have originated in fright and mental anxiety, and was readily reinduced, though in a slighter degree, by any new distress, for several months afterwards.

Although we suppose, in these cases, that the primary disease exists in the cord, the ganglia are necessarily implicated. It is on them, and through them, the spinal irritation exerts its influence; and we may have the upper or lower ganglia affected, according as the irritation shifts its place in the spine. As an instance of this, we have been, within these few days, sent for by the lady whose case is just detailed, and found her labouring under a new train of symptoms: she had been seized, two or three times during the last week, with a sudden rush of blood to the head, which seemed to commence at the clavicles, and pass up in the course of the carotids. There was a momentary faintness, or tendency to insensibility, with loss of power of the arms; and she complained of occasional pain at the crown of the head and brow, sometimes occurring suddenly, and attended by stiffness and tenderness of the muscles at the back of the neck, especially at the right side; she had also slight cough, and an internal soreness of chest, which she compared to the sensation experienced when a blister is taken off. She has had also a return of the palpitations at night. There can be no doubt of these symptoms yielding to the usual treatment.

XXIV. James Hanly, aged twenty-eight years, a labourer, about six months since, after severe labour in drawing loads of manure on his back, felt pain between the shoulders and in the back of the head, with continual drowsiness; could not keep himself awake, and sometimes fell into a state of insensibility, in which he usually lay for some minutes. This was especially apt to occur to him in bed, coming over him, as he expressed it, "like a dream." He had a continual disposition to yawn and stretch himself, which sometimes induced him to hang by the arms from the branch of a tree; but this always brought on the pain between the shoulders and at the back of the head. He lost all appetite, and was frequently attacked with racking pain or cramp in the stomach and sides. He gave up eating in the evening, as he invariably found that it brought on the pain. After some weeks, the headach became more distressing, and he began to be attacked by palpitations, which were soon constant and very troublesome, accompanied by tremblings or shiverings, and by universal throbbing of the arteries. He felt pulses, he said, in every part of his body. The palpitation often occurred in sudden paroxysms; the heart beating as if it would burst the walls of the chest. They frequently extended to the descending aorta, and were felt most distressing at the back. When attacked in this way, he was always obliged to spring from the bed, and walk about the room, until the throbbing abated. In its greatest violence, it was sometimes accompanied by pain or uneasiness in the cardiac region, which passed suddenly to the throat and head, and left him in a state of insensibility. After some months had elapsed, the headach became so distressing, and the pain of the stomach so severe, that it was found necessary to take blood largely twice from the temporal artery within a short period. From this considerable benefit was derived; but the palpitations still continued, often waking him up at night, and terminating in a protracted fit of insensibility, somewhat like syncope, except in the flushing and heat of the face and brow. These usually commenced with general shivering, followed by pain between the shoulders, profuse perspiration, palpitation, and insensibility. He attributed his illness to lifting heavy loads, but thought it might possibly have some connexion with a fracture of the skull which he had received four years since. He was, however, in good health from the time he received the injury until within the last half-year, when his present illness commenced.

The treatment consisted of the bleedings already mentioned; the constant use of the tartarized antimonial ointment to the spine; the *Pil. Aloet. cum Assafœtid.*, with volatile alkali in camphor mixture; and one or two blisters to the back of the neck. There was a perfect recovery in three or four weeks. The spinal tenderness, which was extremely acute in all the cervical and in the seventh and eighth dorsal vertebræ, gradually declining in proportion to the amendment in the more distressing symptoms of the complaint.

In the cases already detailed, especially in our first, it will be recollected that many or all of these symptoms were present, and we shall find them forming a link in the chain of morbid phenomena in almost every severe one which we may have to offer as we proceed. It is necessary again to call the reader's attention to the spinal tenderness which, from its almost invariable presence in such cases as occur to us, we believe may be found in the very earliest stages of all those dreadful fits of palpitation, angina, syncope, &c. dependent on dyspepsia and hysteria. It can matter little whether it be characteristic of a primary affection, created we know not how, or of one originating in the mental, the digestive, or generative organs, if it is capable of becoming independent, and reacting on the system. The only question of importance appears to be, is it casually or ever induced by organic disease of the heart or large vessels? or is it not rather the precursor of these?

The former point we have had but few opportunities of ascertaining; but Mr. Teale states that he has met with some instances of it. We have nevertheless strong grounds for believing that, in the majority of cases, functional disorder of the circulation, and its attendant spinal tenderness, precedes change of structure. The well-known observation of Corvisart, that palpitations and structural affections of the heart increased much during the dreadful period of the French revolution, may be mentioned in illustration of this; as we must suppose the passions of the mind can only act in the first instance on the functions of parts. We have already observed that spinal tenderness does not accompany inflammatory, and we believe it may be said organic, disease in general; and if we could offer it as a certain diagnosis in these as in other affections, it would be very satisfactory; but this would be deducing more from it than, in such obscure complaints, any one character can ever possibly give, and, at all events, must be left to the determination of more extensive observation.

It seems much if its presence materially assists in the diagnosis, and we can conceive cases in which it may decidedly pronounce it, even where the stethoscope, with the most practised ear, has failed.

It may seem, perhaps, extravagant or paradoxical to suppose that functional disorder could imitate the physical signs of organic change; and yet this we are far from thinking impossible.\* Cases have occurred to us in which there appeared to be the utmost moral certainty of organic disease, and which, notwithstanding, got completely well in the course of some months or years, without having been materially benefited by any medical treatment. Dr. Abercrombie relates some such; two of which, if we may reason from the treatment and result, originated in a gouty or rheumatic diathesis. It is not improbable that spinal tenderness would have been found in all of them. Similar ones are related by Cullen and Mason Good; and there can be little doubt but the singular affection of which the late Dr. Bateman eventually died was of this description.

With cases of violent, or irregular, or depressed action of the heart, may be considered similar affections of the arterial system, which will very generally be found to depend on that morbid condition, of a greater or less extent, of the cord, called irritation. Preternatural throbbing of the temporal and carotid arteries will usually be found connected with cervical tenderness, while the pulsations of the aorta in the epigastric region are more probably referable to irritation of the upper dorsal. We speak in this qualified way, because, in all the cases we have met with, there existed tenderness of the whole or the greater part of the spine. Before functional disorders of the cord became a subject of investigation with us, we were often much alarmed and perplexed by these epigastric pulsations, and, in cases presenting many marks of an exquisitely nervous diathesis, were imperfectly contented to assume, with Dr. Baillie, Hunter, and others, that they were not dependent on organic disease; but we now have, it is hoped, in the spinal tenderness, a certain diagnostic, by which apprehension may be at once allayed. Even if it be true that it sometimes is to be met with in aneurism of the aorta, we suspect it would not, for a length of time, give rise to those peculiar nervous symptoms indicative of spinal irritation,

\* Laennec, who ought to be excellent authority on this subject, asserts that, in functional disturbance of the heart, the stethoscopic signs attendant on organic affections may sometimes be detected, and instances especially the *bruit de soufflet*.

which may always be detected at the very earliest period of that affection. A more perplexing case may be imagined in pure disorder of the ganglionic system, on the supposition that it does not occasion spinal tenderness; as here we should have the violent palpitation, as in aneurism, without any mark of affection of the cord; but it is to be recollected that the great sympathetic connects and combines so many parts, by the intimate interweaving of its numerous threads, that no one portion of it could be seriously affected without inducing general disturbance of the abdominal or thoracic viscera. In any symptoms of an hysterical or nervous character, palpitation from ganglionic irritation could not exist with symptoms so few and uncomplicated, and so analogous to what we might associate with physical effects, as those arising from aneurism.

Instances of these affections of the arteries may be found as occasional symptoms, in almost every severe case of spinal irritation which we shall have occasion to quote.

Perhaps no fitter opportunity may occur to offer a few words relative to the disease called *angina pectoris*, which we have had every reason, with M. Laennec, to regard as a neuralgic affection, and, as far as our experience has gone, connected with cervical tenderness. We have not had the good fortune lately to meet with a pure or intense case, but in its less aggravated form, and often complicated with other symptoms, it has frequently fallen under our notice. It was long a distressing affection in the first case detailed in these papers. Mr. Teale has given some very interesting ones, which we are glad to find fully confirmatory of these views.

In concluding this short notice of affections of the circulating system, we would offer one observation. Previous to the time of Corvisart, those resulting from its organic change were little understood, and believed to be very uncommon. The most obvious cases were treated as nervous disorders. The study of morbid anatomy at length produced a total change in medical opinion, and it was soon believed that most or all of them depended on absolute physical changes. As a consequence of this, innumerable patients, who were suffering from dyspepsia, gout, or rheumatism, were put under the severest discipline, and thrown into a state of miserable dejection, by pronouncing their cases organic. Frequent error has now led us to tread back our steps, and we would only beg to remind the reader that, the stronger our reasons may be for doing so, the greater the risk of our again, like the older

pathologists, overlooking organic cases. We know that those called nervous or symptomatic are infinitely the most numerous, but we are also fully impressed with the conviction that instances of altered structure are of daily occurrence.

[To be continued.]

#### PERFORATION OF THE STOMACH.

*Perforation of the Stomach, without Ulceration or Softening of its Coats.* By LEONARD PEIRCE, M.D. of Sutton, Massachusetts.

FLETCHER BOTTOMLY, a native of Cheshire, England, came to the United States in June 1827, then aged nineteen years; he followed weaving in a woollen manufactory.

January 30th, 1829.—I was called about six o'clock this evening to visit him, but, being from home, did not see him till nearly eight. I found him suffering from severe pain in the region of his stomach; feet and hands cold; pulse small and fluttering; countenance contracted and anxious. On inquiring of himself and his comrades, I learned that he had been as well as usual till about five this evening, when he was suddenly seized with a violent pain at the epigastrium, which soon extended downwards, but the seat of the pain remained at the stomach. When first seized, the pain was so violent that he cried out "I am dying," and threw himself upon the floor, holding his bowels with his hands, and pressing his body and thighs together. He was soon helped to his lodgings, which were a few rods distant, but was unable to walk upright, remaining bent, supporting himself with his hands upon his knees. The pain still continued violent, but was not now confined to his stomach, being occasionally as low down as the pubic region. Before I arrived, he had taken an emetic of ipecacuanha, containing eight grains of calomel, which had vomited him twice with some relief; but the pain being now in his stomach, I gave him tepid water, which vomited him twice more, and he expressed himself considerably relieved. I now applied flannels wet with warm water to his extremities, and gave him two grains of solid opium. His extremities soon became warm; pulse fuller and stronger; the pain abated considerably, and he fell asleep. I now directed one ounce of castor oil to be given every three hours until his bowels were moved, and left him for the night.

31st.—At seven A.M. I found him considerably prostrated,

and in rather severe pain; pulse fluttering, and extremities cold. The bowels were fuller than natural, but were not tender on pressure. Had passed a restless night, and taken the oil without producing any sensation of motion in his bowels; much thirst. I now divided two drops of croton oil into six parts, and directed one part to be given every half-hour until the whole was taken, unless a motion was produced. Stimulants were given, and water-gruel for drink.

Four P.M.—Had taken all the croton oil, without producing the slightest cathartic effect. Pulse much as in the morning. Complained of considerable soreness in his bowels, which were rather fuller than in the morning. I should have given enemata, but, for want of the proper apparatus, was obliged to postpone them, and directed one ounce of castor oil to be given every hour, and put a blister upon the epigastrium.

Eight P.M.—Directed an enema of decoction of Senna, which passed off in about twenty minutes, without bringing any fæces with it. In a few minutes I repeated the injection, which soon passed off unmixed with any alvine matter. I directed an enema of milk and molasses, of each four ounces, to be given every hour until his bowels were moved; continued the drink of water-gruel; left him for the night.

February 1st, four A.M.—Vomited a small quantity of dark, fetid liquor, and in about fifteen minutes expired.

I very readily obtained leave of his friends to examine the body; which I did at two P.M., ten hours after his death.

The blister had produced very slight vesication, and the bowels were considerably tumid. On cutting through the parietes of the abdomen, there was a sudden gush of liquor, consisting of those articles he had taken into his stomach, castor oil, water-gruel, &c. I observed to the bystanders that there was a rupture of the stomach or intestines; and I then supposed it to be from ulceration. After removing the fluids from the abdominal cavity with an injecting syringe, I laid open the abdomen, and proceeded to search for disease. The vessels of the omentum, and of the peritoneal coat of the intestines, were considerably gorged with blood; but there were no unnatural adhesions between any of the parts. The mucous coat of the intestines was of a healthy appearance, except in some places in the small intestines there were minute scarlet dots thickly set together. The urinary bladder was entirely empty, and of a healthy appearance. Kidneys healthy. The liver was of a pale

ash-colour externally, and internally much paler than natural. On arriving at the stomach, I found, about half an inch above the pylorus, on the anterior part, an opening about two and a half lines in diameter. This had the appearance of being punched out with a cutting instrument, and was not much unlike the holes made in harness for the buckle tongues; but the edges were not quite so well defined as though cut with an edged tool. There was no appearance of disease about the perforation, either externally or internally, except that the mucous lining of the stomach was filled with black and brown dots, of about the same appearance, except in colour, as the grains of Indian meal taken in gruel.

Bottomly was of a melancholic temperament, tall, spare, and temperate in the use of spirituous liquors. He was a voracious eater, devouring as much at his regular meals as two common eaters, and frequently eating between meals, and always taking some cold food just before going to bed. He had, for several years previous to his death, been afflicted with purulent ophthalmia. Since the time of his arrival in this country, he had been very costive, generally not having a stool oftener than once a week. He had, within three or four months of his death, three small, hard, red, or rather purplish tumors, directly in the pit of his stomach, which were very sore and painful, slow in forming, and difficult to cure. He usually applied a plaster of shoemaker's wax to them, which caused them to ulcerate, and to discharge a sanious, bloody matter; and then they would heal. The last one was a little previous to his death, but had at the time got entirely well.\*

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#### TURPENTINE IN HERNIA.

*On the internal Use of the Spirit of Turpentine in Incarcerated Hernia.* By THOMAS SEWALL, M.D. Professor of Anatomy and Physiology in the Columbian College, District of Columbia.

SOME time since, I was informed by Dr. McWilliams, a highly respectable physician of this city, that he had recently met with two cases of incarcerated hernia, in which the spirit of turpentine, exhibited in large doses internally, was successful in effecting a reduction of the protruded part, after all other means had failed. The circumstances of these cases were such as to inspire me with some confidence

\* American Journal of Med. Sciences.



in the powers of the turpentine, and induce me to determine on its application as soon as an opportunity should present. It was not long after that the following case of incarcerated scrotal hernia came under my charge.

Early on Sunday morning, I was called to visit a labouring man, by the name of Penn, a brickmaker by trade, a short, robust person, of about twenty-five years of age. He had enjoyed perfect health, with the exception of an entero-scrotal hernia, under which he had laboured for a number of years, and for which he had worn a truss.

On my arrival, I found that he had been in a state of great suffering during the night, and that he was still affected with intense pain and high fever. From inquiry I learned that, while at work at his usual occupation, the day previous, the intestine escaped through the abdominal ring, and descended into the scrotum, and that all the efforts which he could make to reduce it were ineffectual. On examining the scrotum, I found it greatly distended, hard, and tender to the touch.

I first attempted a reduction of the bowel by taxis; but, as my exertions were unavailing, I bled him largely, and then renewed my exertions, but without success. I then gave him two ounces of the spirit of turpentine, and instructed my pupils, who remained with him, to repeat the same dose every hour, till eight ounces were taken, or some sensible effect produced. Soon after I left him, a profuse sweat took place, and he fell into a tranquil sleep. In about two hours, the hernial tumor became soft and yielding, and spontaneously retired from the scrotum. On repeating my visit in the middle of the day, I found he had taken about six ounces of the turpentine, and without experiencing any inconvenience from it. He was still sleeping, and entirely relieved. The next day he was at work in the brickyard, and with no other complaint than that of a slight looseness of the bowels, and a scalding sensation in the rectum in passing his stools. No strangury was produced.

Although it requires the experience derived from many cases to entitle a new remedy to confidence, the beneficial effects of the turpentine were so obvious and striking in the above cases, that I have thought proper to call the attention of the profession to its further trial.\*

\* Ibid.

## HOSPITAL REPORTS.

## ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

*Report of the various Plans of Treatment pursued at this Hospital. Drawn up by the direction of Mr. GUTHRIE, by J. FOOTE, jun.*

*Catarrhal Inflammation of the left Eye treated by copious Depletion. Six Pints of Blood taken in twenty-two Hours.*

ROBERT SAFE, ætat. forty, admitted September 13th, 1829, has been ill about ten or eleven days. He first attended about a week ago, when the inflammation was by no means so severe as at present. The Ung. Argent. Nitr. was applied, and he had six grains of the Hydrarg. Subm. to take at bedtime, and an ounce of the Magn. Sulph. in the morning.

The application of the ointment caused such pain, that it deterred him from attending again during the remainder of the week; though he himself said that he was more frightened than hurt, and that, when the irritation from the ointment had subsided, his eye was considerably better.

When he re-attended, considerable tumefaction of the lids existed, particularly of the lower one, which was also discoloured; the conjunctiva highly injected and swollen; a puriform discharge is also present, but not in great quantity, attended with severe pain round the orbit, increased so much at night that it prevents his sleeping. Has no appetite; much thirst; tongue white; pulse full, about ninety-eight.

He was seen at two in the afternoon, when venesection was performed to twenty-six ounces, and twenty ounces taken by cupping from the left temple. Habeat Hydr. Subm. gr. vi. h. s. sum. Magn. Sulph. ʒi. mane. Bathe the eye with cold lotions three or four times a day.

14th, ten o'clock A.M.—The pain was removed for a time by the bleeding, and he says he felt altogether better. It returned, however, during the night with as much violence as before. The appearance of the eye is much the same, though there is not so much inflammation. The discharge is the same, if any thing, rather thicker. Pulse about ninety-four, not so full; bowels open.—Venæsectio ad deliquium (ʒxl.) Appl. Cucurb. cruent. ad ʒx. temp. sinist. R. Pulv. Ipec. c. gr. x.; Hyd. Subm. gr. iv. M. fiat pulv. h. s. s. Rep. Lotio frigid.

He was bled in the erect position, with a large opening, and in a full stream.

15th.—Fainted twice yesterday in consequence of the loss of blood. Is much better, and remains nearly free from pain. The discharge is less; the lids are not so much tumefied; can open his eye, and bear the light better.—Hyd. Subm. gr. vi. h. s. sum. Magn. Sulph. ʒi. mane. Rep. Lotio.

16th.—Mouth touched by the mercury. His eye is much better; the lids have nearly regained their natural appearance;

the discharge is decreasing.—R. P. Jalap. c. ʒi. mane sumend. Lotio Aluminis oculi.

17th.—The discharge has nearly ceased. Mouth still sore. Can see a great deal better; the lids have their natural appearance; the redness of the conjunctiva fast disappearing.—Repet. Pulv. et Lotio.

Has not since returned.—Case by J. FOOTE, jun.

*Inflammation of the Cornea with Ulcer after Smallpox, treated in the first instance by the Antim. Tart. unsuccessfully, and cured by the application of the Ung. Argent. Nitr.*

Betsy Froth, ætat. eighteen, admitted December 8th, 1829. Inflammation of the sclerotic and cornea, with ulcer on the cornea. Complains of great lachrymation and intolerance of light; very imperfect vision, accompanied by great pain in the eye and brow. The lids are much inflamed, and the sclerotic inflammation is very intense, forming a zone of thickly-set vessels round the cornea, which is clear except where the ulcer is situated, which is surrounded by an effusion of lymph. States that she was cured of the smallpox about a fortnight ago; since when, the present disease has been gradually appearing. When the disease first appeared, she made use of an empirical remedy, called the "golden ointment," which she thought did her good at the time, but it has now ceased to relieve her.—Appl. Cucurb. cruent. ad ʒxij. temp. R. Antimon. Tart. gr. ij.; Magn. Sulph. ʒij.; Aquæ fervent. Oss. sum. 8vam partem omni horâ.

9th.—Is entirely free from pain. She thinks her vision is improved; the inflammation is diminished. The medicine made her sick last night, and during the retching blood flowed from the cupping; it has excited nausea and a sensation of fainting.—Cont. medicamenta.

10th.—Medicine causes vomiting night and morning. She is free from pain; vision is improved; the inflammation is diminished.—Cont. medic. sum. 8vam partem omni horâ et semisse.

11th.—Sees better, and was altogether better until four this morning, when she was attacked by a severe darting pain in the brow and eye, with increased lachrymation and intolerance of light. The sclerotic inflammation is more severe; the lids are highly inflamed. The ulcer is healing, and the vision is improved. The medicine does not cause vomiting at present, but continues to excite considerable nausea.—Appl. Hirudines iv. ad palp. infer. R. Antim. Tartar. gr. ij.; Magnes. Sulph. ʒij. Solve; sumatur 8vam partem omni horâ.

12th.—She complains of a severe darting pain in the brow, lasting about half an hour, and recurring once in the day. Vision remains much the same. The medicine continues to excite considerable nausea and purging, but all vomiting has ceased. Tongue white and furred. The inflammation is not so intense.—Appl. Hirud. iv. ad palp. Appl. Emp. Lyttæ pone aurem. Rep. Ant. Tartar. Antiphlogistic diet.

13th.—Is much better. The house-surgeon saw her, and directed three leeches only to the lower lid.—Rep. Ant. Tart.

14th.—The pain returned twice yesterday, but was neither so severe nor did it last so long. The sclerotic inflammation is more intense on the inner part of the ball, forming a complete network of vessels; lids inflamed. The ulcer and opacity of the cornea are diminishing in size. Great lachrymation evening and morning; tongue white and furred; tolerable appetite; pulse regular. Medicine excites nausea and purging. The blister rose well after the lapse of twelve hours.—Hirud. iv. ad palp. infer. Rep. medic.

15th.—Vision is a little improved since yesterday. Pain not so severe, nor does it recur so frequently; lachrymation and intolerance of light diminished; inflammation is likewise considerably better. The medicine excites much nausea.—Cont.

16th.—Is better.—Rep. Antim. Tartar. Omitte Hirudines.

17th.—Continued improving during the whole of the day of the 16th, but, owing to the non-application of the leeches, she became much worse in the course of the evening. The inflammation is more severe, and she complains of great pain in the eye. Vision much the same.—Rep. applic. Hirud. iv., et Mist. cum Antimon. Tartariz.

18th.—Is a great deal better; vision improved; less intolerance of light. Medicine still excites nausea.—Rep. Hirudines et Mist.

19th.—The inflammation is *again* much increased in severity; the sclerotic appears a complete network of pink vessels. Not much lachrymation; intolerance of light; vision unimproved; free from pain; lids highly inflamed. The ulcer appears much the same.—Appl. Ung. Nigr. R. Pulv. Jalap. c. ʒi. primo mane sumend.

21st.—Is much better; inflammation is abating.—Rep. Ung. et Pulv.

22d.—Is a great deal better; vision much improved; ulcer healing.—Rep. Ung. Nigr.

24th.—Inflammation disappearing; vision greatly improved.—Ung. Nigr.

26th.—The inflammation has again returned.—Appl. Ung. Arg. Nitr.

29th.—Much improved. Rep. Ung.

31st.—Vision is a little improved; free from pain.—Ung. rep.

January 2d, 1830.—Is a great deal better; the inflammation is fast disappearing, and vision is much improved; entirely free from pain.—Vin. Opii ad ocul.

5.—Nearly well; no inflammation.—Rep. Vin. Opii.

Case by J. FORT, jun.

*Inflammation of the Cornea with Ulcer, treated by Cupping and the Ung. Argent. Nitr.*

Elizabeth Green, ætat. twenty, admitted December 8th, 1829. Acute inflammation of the conjunctiva and cornea, with ulceration.

Complains of great pain in the brow, and a feeling as if sand were under the lid; vision nearly lost. Catamenia not regular; tongue white; bowels costive. Her eye has been inflamed three weeks; thinks it proceeds from cold.—Appl. Cucurb. cruent. ad 3x. temp. Appl. Ung. Argent. Nitr. ad ocul. R. Hyd. Subm. gr. vi. h. s. s. Magn. Sulph. ʒi. mane sumend.

12th.—Is much better; the pain is much relieved, and is situated more in the brow at present. The inflammation is still very great; not much lachrymation. Vision much improved.—Rep. Ung. Nigr. Cont. Pil., Magn. Sulph.

13th.—Is better. Rep. Ung.

15th.—Is a great deal better; ulcer healing; not so much lachrymation; the inflammation is abating; does not suffer so much pain as before; vision much improved.—Rep. Ung.

17th.—Ulcer healing; inflammation diminished.—Rep. Ung.

19th.—Inflammation nearly gone; vision much improved.—Rep. Ung.

22d.—Nearly well. Rep.

24th.—Inflammation has disappeared. Rep. Ung.

29th.—Ulcer healed.—Appl. Vin. Opii pro leucomâ.

Case by J. Foote, jun.

*Inflammation of the Cornea, treated by the Ung. Argent. Nitr.*

Sarah Ashley, ætat. fifteen, admitted October 29th, 1829, with inflammation of the cornea of each eye: both cornea much thickened and muddy; the right is much the worst; vision nearly lost. Complains of pain in the head. Bowels constipated; tongue clean; pulse natural. The inflammation commenced about six months ago.—Appl. Ung. Nigr. R. Ext. Coloc. c. gr. iij.; Hyd. Subm. gr. j. M. fiat pil. horâ somni sumend. R. Sulph. Magn. ʒi. mane primo sumend.

31st.—Feels better since the application of the ointment, and wishes it to be repeated.—Appl. Ung. Nigr.

November 3d.—The inflammation of the cornea of the left eye is almost removed; the muddy appearance of the right is much diminished.—Rep. Ung. Pilul. purg. omni nocte.

5th.—Is much improved.

14th.—The inflammation of the left cornea has disappeared, and the right is much improved. Complains of very little pain in the head. Bowels costive; pulse natural.—R. Pulv. Jalap. c. ʒi. nocte. Magn. Sulph. ʒi. mane.

17th.—Cont. medic.

24th.—Is very much improved. Rep. Ung.

December 1st.—The muddy appearance is nearly removed.—Rep. Ung.

15th.—The right eye continues improving, and her vision is nearly as good as ever.—Appl. Ung. Nigr. Rep. Pulv. purg. et Sulph. Magn.

28th.—The muddy appearance is entirely removed; the inflammation is very slight, and merely of the lids; vision as good as ever.—Ung. rep.

Discharged cured.—Case by Mr. CLARK, M.D.C.S. Edin.

BRITISH LYING-IN HOSPITAL.

*Uterine Phlebitis, with Ulceration of the Articular Cartilages, and Purulent Effusion within the Capsular Ligament of the right Knee-joint.\**

MRS. MAYHEW, ætatis thirty-three, was delivered in the British Lying-in Hospital, on the 2d March, 1829, after an easy and natural labour. The placenta was expelled in a few minutes after the infant, and she appeared to recover in a favorable manner, until the third day, when a discharge of blood from the uterus took place.

From the 6th to the 20th of March, she made no complaint of uneasiness in any region of the body, though the strength rapidly declined. The countenance was of a dusky yellow hue; the heat of the surface slightly increased; the respiration hurried, particularly on bodily exertion, and the pulse was above 130, and feeble; the tongue pale and glossy, with total loss of appetite, though at no period was there nausea or vomiting. The uterus gradually receded into the pelvis, and pressure over the hypogastrium produced no sensible uneasiness. The milk was secreted sparingly. The lochial discharge had a peculiarly offensive smell.

From the 20th to the 28th, when she died, the prostration of strength increased, and the pulse became still more frequent and feeble; the respiration was extremely hurried, and she was incessantly harassed with a hacking cough, and the expectoration of a frothy mucus. The abdomen continued soft and flaccid, and not affected by pressure. She, however, during this period, complained of excruciating pains in all the joints of the right superior extremity, and in the right knee-joint, which was observed to be considerably swollen, but not discoloured.

*Dissection.* The uterus was found reduced to its usual size a month after delivery, and no morbid appearance was visible on its peritoneal surface, except a slight adhesion between its left margin, near the entrance of the fallopian tube and the rectum. The uterus being removed from the body, and the cavity laid open, there was found to be a portion of placenta, about the size of a nutmeg, in a putrid state, adhering to its inner surface, at the part corresponding with the adhesion between the peritoneal coat and rectum. The substance of the uterus, to the extent of an inch around this, was of a peculiarly dark colour, almost black; and as soft as sponge. On cutting into it, about a teaspoonful of puru-

\* From a paper of Dr. R. LEE's, "on Inflammation of the Veins of the Uterus, &c." *Medico-Chir. Trans.* vol. xv. part ii.

lent matter escaped from the veins, and a small additional quantity was pressed out from them. The spermatic and other abdominal veins presented no morbid appearance, and the uterine appendages were healthy.

On opening the capsular ligament of the right knee-joint, where a fluctuation was perceived, about six ounces of thin purulent fluid escaped, and the cartilages of the femur and tibia were extensively eroded. There was no appearance of inflammation, however, exterior to the capsular ligament. The right wrist was swollen, but the structure of the joint was not affected. The cellular membrane around it was unusually vascular, and infiltrated with serum.

The patient, whose case I have now related, was under the immediate care of my friend and colleague Dr. Henry Davies, who was present at the dissection, and also Mr. Armstrong, of Golden square.\*

The preceding case, and others of a similar description, to which Mr. Arnott and M. Dance have alluded in their valuable essays, induced me to believe that the violent and destructive affections of the joints, which sometimes occur in puerperal women, were invariably connected with inflammation of the uterine veins; but in the following fatal cases, though these vessels were minutely examined, no morbid alteration of structure in their coats could be detected.†

#### *Inflammation of the Saphena Veins, fatal on the sixteenth day after Parturition.‡*

Mrs. MILLS, æt. thirty, a patient of the British Lying-in Hospital, was delivered of her fourth child on the 7th instant, after a natural labour. During the latter months of gestation, she had suffered much from œdema, and a varicose state of the veins of the lower extremities. Two days after her confinement, she began to complain of pain in the superficial veins of both legs; and, during the subsequent weeks, a diffuse swelling and erysipelatous redness of the surface took place in the calf of the left leg, and in a less degree in that of the right. This was accompanied with violent febrile disturbance.

I first saw her on the 16th instant, the seventh day after the commencement of the disease. The pulse was 100; tongue red;

\* See Medical Gazette, vol. iii. April 25, 1829.

† Dr. Denman had noticed these affections of the joints in puerperal women, for he observes, "There is a peculiarity in this fever, which I believe has not hitherto been observed or mentioned. It is an erysipelatous tumor, of a dusky red colour, on the knuckles, wrists, elbows, knees, or ankles, about the size of a shilling, and sometimes larger. This is almost universally a mortal sign, and, on the inspection of those who have died with this appearance, the disease has been found to have affected principally the uterus or its appendages." (Introduction to Midwifery, p. 570.)

‡ Ibid.

countenance flushed, skin hot, and respiration hurried, with much jactitation and delirium.

The left lower extremity, now chiefly affected, presented the following appearances: From the knee to the ankle, on its inner surface, the integuments were hot, swollen, and tense; and in several places, large patches of a dark red colour were observed over the veins; which being laid open in two places, a considerable quantity of purulent fluid was discharged. Where the swelling and tension were least, the superficial veins could be felt distended like hard cords, as could also the saphena, through its whole course upward from the ham to its junction with the femoral vein. In the course of this vein there was considerable swelling, and the integuments in this situation, as far as the middle of the thigh, were hot, and of a dark red colour.

The right leg was similarly affected, but in a very inferior degree to the left.

17th October.—Pulse 120. Little marked change in the general symptoms. Left thigh much more swollen, and the saphena vein now painful, indurated, and enlarged. Above the ankle other two abscesses have formed, and been opened. A small abscess has also formed above the knee of the right extremity, which in other respects is improving.

19th.—The left extremity, from the ankle to the groin, is on its surface more swollen and painful, and the saphena vein can be felt still more enlarged. The abdomen is tympanitic and exquisitely sensible on the left side when pressed. Pulse 160; subsultus tendinum; urgent thirst; tongue brown and parched; skin hot; countenance flushed and anxious; delirium diminished.

During the succeeding three days, there was a gradual exacerbation of all the symptoms, and she died on the 23d instant, being the fourteenth day from the commencement of the symptoms.

My friend Dr. Sims was present, and assisted me at the dissection on the 24th, and the following is our joint report of the morbid appearances:

The extremity was very much enlarged. The cellular and adipose membranes from Poupart's ligament, along the inner surface of the thigh and leg to the ankle, were indurated, vascular, and infiltrated with a red-coloured serous fluid. Several abscesses were observed in the cellular tissue immediately beneath the skin in the calf of the leg, and an extensive collection of purulent fluid had formed in the interstices of the gastrocnemii muscles. The branches of the saphena vein in this situation were converted into solid impervious cords, and the coats of this vein from the knee to its junction with the femoral were thickened and contracted; and in the lower part the cavity was nearly obliterated. The saphena vein was lined with an adventitious membrane of considerable thickness, which was easily separated from the inner coat. Its opening into the femoral vein, though reduced in size, was pervious, and the coats of the femoral from this point to the ham



were thickened and contracted. The inner membrane was rugous, and of a deep red colour, but no deposit of lymph was observable, and its canal was pervious.

The femoral vein above the termination of the saphena, and the whole of the external iliac, were thickened; and slightly contracted in their diameters, and lined with a thin coating of lymph. These vessels were pervious, and the common and internal iliac exhibited no sign of disease.

The intestines were inflamed, and on the ascending colon there was a small part in a state of sphacelus.

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## CRITICAL ANALYSES.

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*Quæ laudanda forent, et quæ culpanda, vicissim illa, prius, cretâ; mox hæc, carbone, notamus.*—PENNIE.

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*Researches principally relative to the Morbid and Curative Effects of Loss of Blood.* By MARSHALL HALL, M.D. F.R.S.E. &c. &c.—8vo. pp. 303. Seeley and Burnside, London, 1830.

IN our last Number we gave an analysis of the first part of this ingenious and interesting work. We shall now proceed to submit to our readers a condensed account of the second part, the object of which is to treat of bloodletting as a remedy; to prescribe and to limit its use, and to guard against its undue employment. It is impossible that more important points for consideration can occupy the time of an author. Dr. HALL's attempt is at least creditable, and, if it be attended with success, even partial success, it must prove of the utmost benefit in our management of disease. A quarter of a century ago, debility occupied every man's mind, and the profession were deterred from the use of the lancet in cases in which we now know it was imperatively required. A reaction of opinion took place, and became excessive, and led to an immoderate employment of bloodletting. Both these extremes of opinion were fatal. From the influence of the former doctrine, inflammation was frequently allowed to run on, and to destroy its victim. The second error is more often fatal, by inducing irremediable exhaustion. How then shall we avoid extremes, alike so replete with evil? This important question Dr. Hall endeavours to answer in the second part of his work.

"It is one of the most remarkable facts in physic, that if several patients of similar strength and constitution, but affected by

dissimilar diseases, be respectively placed in the erect position and bled to delirium, they will be found to have lost very various quantities of blood. I have known a patient, not apparently very feeble, faint on losing four ounces of blood; and I have known patients bear to lose fifty, sixty, and even seventy ounces of blood without syncope.

"This fact, plain and simple as it is, with its rationale and practical applications, has, I think, been greatly overlooked.

"Its rationale is to be found, I believe, in connexion with an equally interesting fact, that different diseases induce in the constitution different powers or susceptibilities in regard to the effects of loss of blood. Each disease appears, indeed, to possess its own peculiar and intrinsic virtue in this respect. This is determined by placing the patient perfectly erect, and bleeding to incipient syncope: the quantity of blood which flows is the measure of the protective influence of the disease in one class of cases, and of its influence in superinducing a susceptibility to the effects of loss of blood in the other.

"An interesting scale of diseases may be formed representing these properties. It would begin with congestion of the head, or tendency to apoplexy; inflammation of the serous membranes, and of the parenchymatous substance of various organs, would follow; then acute anasarca; and, lastly, inflammation of the mucous membranes. This part of the scale would be divided from the next by the condition of the system in health. Below this would be arranged fever, the effects of intestinal irritation, some cases of delirium, reaction from loss of blood, and disorders of the same class with hysteria, dyspepsia, chlorosis, and cholera morbus.

"Persons in health and of moderate strength will generally faint, if bled in the erect posture, on taking fifteen ounces of blood. I have known seventy ounces to be taken in the sitting posture, in the tendency to apoplexy, without syncope; but the case is an extreme one. Patients with pleuritis or pneumonia frequently lose thirty-five ounces of blood without fainting. In bronchitis, little more is borne to be lost than in health. A stout person in fever will frequently faint on losing ten, twelve, or fourteen ounces of blood. In intestinal irritation, with urgent symptoms even, the abstraction of nine or ten ounces of blood will generally induce delirium. In delirium tremens, or puerperal delirium, the patient soon faints from loss of blood. The same thing is still more observed in those cases of violent reaction which arise from loss of blood itself. In dyspepsia, hysteria, and chlorosis, the susceptibility to syncope from loss of blood is very great; and I have known a patient, of good strength, affected with cholera, faint on taking four ounces of blood, although she had shortly before borne to lose nearly twenty ounces without faintness, under the influence of inflamed mamma.

"I imagine that the rationale of this fact will be found in the

obvious difference in the nature of these diseases. In all those cases in which the circulation of the heart and larger arteries alone is affected, and especially in such as involve irritation or exhaustion, there is early syncope on taking blood. But in such cases as consist in an affection of the capillary circulation, and especially such of these as affect the head, it requires the abstraction of much blood to induce deliquium. Syncope is prevented by the influence exerted by this state of the capillary circulation over that of the heart and larger arteries, and over the whole system, and especially over the circulation within the brain; and it does not entirely subdue the morbid action of the capillary vessels even when induced. To induce syncope in pure fever, we have then but to subdue the state of reaction in the heart and larger arteries. In inflammation, we have not only to do this, but to overcome the influence of a permanent morbid action of the capillaries: this is especially observed in inflammation of the serous membranes and within the head.

"The practical application of this fact consists chiefly in its affording a rule for bloodletting in all cases in which this measure is required to be fully instituted; a guard against undue bloodletting, both in this and some other cases; and a source of diagnosis.

"The quantity of blood which flows when a patient requiring full bloodletting is placed upright and bled to deliquium, seems accurately proportionate to the exigencies of the case. In inflammation much blood should be taken, and much blood will flow before deliquium is induced: in irritation little blood should be drawn, and there is early syncope from bloodletting. The quantities are even accurately suited, not only to the exigencies of the disease, but to the powers of the system; at least, so it appears to me from considerable experience.

"The rule is suited also to the degree and the duration of the disease; for, with each of these, its influence in inducing tolerance or intolerance of loss of blood is respectively augmented.

"It is not less adapted to those most frequent of all events, mixed cases. Inflammation and irritation may be conjoined: for example, there may be mere nephralgia, or absolute nephritis, from calculus, or a mixed case involving both. There may be mingled intestinal irritation and inflammation. In each of these circumstances, the rule for bloodletting which I have proposed adapts itself accurately to the demands of these various morbid affections, and to the actual strength and condition of the general system." (P. 175.)

Dr. Hall proceeds to state that, as in inflammation we *must*, so we *may* bleed freely; whilst in other cases bloodletting, as it is not so required, so it is not so *borne*. These points are determined first by the diagnosis, but secondly by the ready or tardy induction of syncope on taking blood

in the perfectly erect position. Dr. Hall observes further, that in all cases in which there is early syncope from blood-letting, the secondary or more remote effects of loss of blood are most apt to supervene: in such cases, too, there is the greatest danger of the sinking or more sudden failure of the vital powers. The rule proposed becomes in its turn, too, diagnostic; great tolerance of loss of blood denotes inflammation; great susceptibility to its effects, diseases of another and very opposite character.

These observations are followed by a valuable contribution from the pen of our talented correspondent, Mr. HEMING, copied from the Medical Gazette. Mr. Heming's experience confirms the statements of Dr. Hall in every respect. This gentleman has also brought together several cases from various authors illustrative of the same views.

We are next led to the consideration of "some diseases in their relation to loss of blood." Under this head the author passes in review fever, inflammation, irritation, accidents, and operations.

"Fever seems to differ from inflammation in being an affection of the whole nervous and vascular systems; in inflammation there is an affection of these systems in one part or organ.

"There is another difference between these two diseases: fever appears to consist in an affection of the nervous system and of the heart and larger arteries, the capillary vessels being only affected as an extension of this morbid state. In inflammation there is, according to the experiments of Dr. Wilson Philip and Dr. Hastings, a primary affection of the capillary vessels, consisting in enlargement of their diameter, and a slower movement of more numerous globules of the blood. A consequence which flows from this view of the subject is, that to subdue momentarily the state of fever, we have only to subdue the augmented action of the heart and larger arteries; but as the capillary circulation is less immediately under the influence of the heart, the action of the former may be subdued, whilst a morbid state of the latter may be continued with comparatively little change.

"It is upon this principle, I believe, that a fact is to be explained, which will be frequently adverted to in this work, that syncope is more readily produced by the abstraction of blood in pure fever, and in other diseases consisting alike in the state of the heart and larger arteries, than in pure inflammation, consisting in a peculiar condition of the capillary vessels, more permanent and less under the influence of the general circulation.

"In the former case, syncope is the simple effect of depriving the heart and arteries of their accustomed stimulus, and this probably under circumstances of augmented susceptibility of the nervous system to impressions of this kind; in the latter, although

blood may be taken, and the action of the heart and arteries be thus subdued, yet, from a less degree of susceptibility of the nervous system, and from the unsubdued morbid action of the capillaries, acting as it were as a permanent stimulus to the general system, syncope is not so soon induced by the abstraction of blood. But whatever the explanation of this fact may be, the fact itself is, I think, established upon the sure ground of multiplied experiment.

"There are three circumstances in fever which should lead to the use of the lancet. The first is excessive reaction of the vascular system; the second, much excitement of the nervous system, especially violent delirium; and the third, and the most imperative, the existence of local inflammation. Each of these cases will require a few observations.

"In excessive vascular reaction, bloodletting is of the most essential service, especially early in the disease. The quantity of blood which should be taken must depend upon many circumstances, as the strength of the patient, the stage of the disease, the character of the epidemic. But the limit beyond which it would be dangerous to go is, I think, clearly marked out by the degree of susceptibility to the effects of loss of blood, denoted by the tendency to syncope on abstracting blood pretty freely in the erect posture. But, as I shall recur to this question, I would only repeat in the present place, that the susceptibility to the effects of loss of blood is far greater than in inflammation. I have known very stout persons, in the strong reaction of fever, faint on withdrawing four, six, eight, ten, and twelve ounces of blood in the erect posture.

"The same observation may be made in regard to great nervous excitement denoted by delirium. To abstract a moderate quantity of blood, does great good; but to bleed too freely, is dangerously to depress the powers of life. In this case, as in the last, the patient may safely be placed in the erect posture, and bled to incipient syncope, if it be a first bloodletting and early in the disease.

"But the most marked difference in regard to the powers of supporting the loss of blood, is superinduced by the addition of a local inflammatory affection to the original disease. The patient immediately becomes less prone to faint on being bled. It will be obvious how important it would be to establish this point accurately by an ample collection of facts, and thus to trace it in its reference to practice. It appears to me, from what I have hitherto ascertained, that there is, in every instance, a strict alliance between the degree of tolerance of loss of blood and the exigencies of the cure." (P. 197.)

Upon the important subject of "irritation," Dr. Hall offers many original and very ingenious remarks.

"I proceed to notice a morbid affection of very frequent occurrence, and with which the profession generally appear to me still

to be totally unacquainted. This statement will not be deemed too strong, if I am enabled to show that there is a series of cases, not generally distinguished from certain inflammations, and yet very different in their nature, and especially in their reference to the effects of loss of blood.

"The cases to which I allude resemble, in their symptoms, the most acute forms of arachnitis, pleuritis, and peritonitis, but especially arachnitis. Yet, instead of possessing the power of resisting the effects of loss of blood belonging to inflammation, there is the utmost degree of susceptibility to those effects. In the former cases, thirty, forty, and even fifty ounces of blood may flow before the slightest deliquium is observed: in the latter there is frequently the most perfect syncope on abstracting nine or ten ounces of blood.

"The irritation of a calculus in the ureter, or in the hepatic duct, is well known to occasion a remarkable sympathetic affection of the stomach. The introduction of a bougie into the urethra sometimes induces rigor and a complete paroxysm of fever. Uterine irritation is not less frequently the cause of extraordinary effects upon the system generally, and upon various organs.

"But, of all the sources of sympathetic morbid affections, irritation in the stomach and bowels appears to be the most common, and certainly not the least important. Indigestible substances taken, and disordered feculent matter retained, are the frequent sources of that combined affection of the head and the stomach, termed sick headach.

"If such effects of local irritation upon distant organs, then, be universally known and admitted, it cannot be considered as extraordinary that others less recognised should exist. But such a point is to be established by facts, not by argument. I proceed, therefore, to detail some cases, which will, I doubt not, if perused with attention and without prejudice, fully convince the reader of the occurrence of a form of disorder hitherto overlooked, or mistaken for other diseases, but very distinct, and very important to be distinguished.

"The most frequent cause of this affection is a disordered state of the contents of the colon; the next is, some indigestible substance taken into the stomach. But as the mere presence of a calculus in the ureter is not always sufficient alone to induce an attack of pain and vomiting, so a deranged condition of the intestinal contents will not, alone, induce an attack of the morbid affection which I am about to describe: in general, some superadded cause, some shock sustained, or some effort made by the system, is necessary to rouse into activity the cause of irritation, otherwise dormant. In the same manner, indigestible substances may frequently be taken, when the health is unimpaired, with impunity; but, if the system be under the influence of shock, or effort, or of nervous or vascular excitement or exhaustion, a cause of disorder

which might have been inert in other circumstances, proves of frightful activity.

"The effects of intestinal or nervous irritation, are chilliness, varying from coldness of the extremities to extreme rigor, followed by great heat of the surface, and symptoms resembling those of arachnitis or peritonitis, singly or successively, in their most acute forms, but especially arachnitis; more rarely there is pain resembling that of pleuritis; more rarely still, a peculiar pain passing along one side of the neck to the shoulders; and occasionally, generally after bloodletting, there is palpitation of the heart.

"It must be regarded as extraordinary that such marked affections have not been discriminated, and traced to their proper source. But I am persuaded that they are, to this day, confounded with inflammation of the organs chiefly affected, to the great injury, and even danger, of the patient. It is, indeed, extraordinary how slow the human mind is to receive new impressions, even of the truth, wedded as it usually is to first opinions.

"These observations apply particularly to that form of this affection which resembles arachnitis. There are few who distinguish it from arachnitis itself. I have, however, witnessed some very interesting scenes, and not less interesting convictions of the truth of the views which I have taken of this subject, in cases which have occurred in the persons or in the families of medical gentlemen themselves. Two of these cases I propose to detail briefly; premising, that the mere fact of the most acute symptoms, resembling those of arachnitis or peritonitis, having yielded without the abstraction of blood altogether, or without a shadow of that degree of bloodletting which is absolutely necessary for the cure of these inflammatory diseases, is alone sufficient to convince us that there is a case of morbid affection, resembling in its symptoms, but differing in its nature and treatment, from those diseases." (P. 210.)

We pass on to the discussion of the "due institution of bloodletting," the aim, and end, of our author's labours. Under this head Dr. Hall treats of *early* bloodletting; of a *first* bloodletting; of the *repetition* of the bloodletting; of bloodletting as a preventive of inflammation; of *late*, and of local bloodletting.

"Most diseases may, indeed, be divided into the stages, 1, of accession; 2, of full development; 3, of disorganization of the part or parts affected; and 4, of deterioration or failure of the powers of the general system. It is very essential to bear this view in mind, whenever we may be required to determine the question of bloodletting. It will guide us far better than days or dates. If the disease be formed, and not merely expected, the earlier the lancet is used the better. If it be fully developed, bloodletting is still more required, and even better borne. It is

when disorganization is great, and the powers of the system are shaken, that it requires the utmost caution and skill to conduct the treatment of the case.

"Early in the disease, a single bloodletting to syncope will often prove sufficient for the cure. If this remedy be employed later, it will usually be necessary and safe to repeat it." (P. 269.)

Upon the question of a first bloodletting, Dr. H. observes,

"The necessity and propriety of a first bloodletting must be determined by the diagnosis of the disease, and by a due estimation of the powers of the patient.

"In the case of inflammation, no one would think of trusting the safety of the patient to any other remedy than bloodletting; and in the case of irritation, bloodletting, although a subsidiary, may still be a useful remedy.

"The propriety of the measure having been thus determined, the next question is that of the due and proper mode of its administration. What quantity of blood should be taken? This question must involve the consideration of the nature, stage, and degree of severity of the disease, and of the strength, and the greater or less power or susceptibility in regard to the effects of loss of blood, of the patient. How difficult must it frequently be accurately to determine these points! This can only be done in many cases, indeed, by watching the effects of the loss of blood as it flows: and yet the usual mode of proceeding, is to prescribe the quantity of blood to be drawn, and forthwith to leave the patient in the hands of one from whom, however competent, the right, or at least the freedom, of judgment is thus preposterously taken." (P. 272.)

We have known many cases in which, if the following very important practical remark had been known or attended to, patients would probably have escaped from lingering and painful diseases.

"In determining the question of the propriety of a repetition of bloodletting, many circumstances require to be considered. But I would remark, in the first place, that if much blood have flowed at the first bloodletting, it must be taken as indicating the necessity for an early repetition of our visit at least; for it will also, unless the symptoms have been greatly subdued by it, indicate the necessity for a prompt repetition of the remedy." (P. 279.)

The author's remarks on bloodletting as a preventive of inflammation merit the attention of every practitioner.

The chapter "on bloodletting in infancy and childhood" is also replete with valuable practical comments.

"Not the least interesting application of the rule which I have proposed to guide and govern us in the use of bloodletting, is its use in the treatment of the diseases of infancy and childhood.



This tender age is far more liable than later years, both to the insidious and the sudden fatal effects of loss of blood; it therefore requires to be viewed with still greater care and watchfulness.

"The modes of general bloodletting employed in infancy and childhood are, leeching, cupping, and venesection.

"I must first, once for all, protest against the usual plan of applying leeches in infancy, and allowing the bites to continue to bleed. Nothing can be more indefinite; nothing more replete with danger. Most of all, it is dangerous to apply leeches late at night: the bleeding may go on unobserved and unsuspected, and precipitate the little patient into a state of irremediable sinking.

"The proper mode of abstracting blood in infants or children, whether by leeches, cupping, or venesection, is to place the little patient upright, and watch the countenance. On the very first indication of pallor or faintishness, the flow of blood must be stopped.\* For this purpose the leeches, or the cupping glasses, are to be removed, or the vein secured." (P. 291.)

The vast importance of the subjects to which Dr. Hall directs the attention of the profession, is too obvious to be formally insisted upon; and we are confident that they who will attentively consider the doctrines inculcated in the volume we have just noticed, will be inclined with us to give it a high rank in the medical literature of the present day. We are gratified to find that a second edition of Dr. Hall's *Treatise on Diagnosis* is preparing for publication.

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*A Treatise on Fever.* By SOUTHWOOD SMITH, M.D. Physician to the London Fever Hospital.—8vo. pp. 436. London: Longman, 1830.

*Clinical Illustrations of Fever; comprising a Report of the Cases treated at the London Fever Hospital, 1828-1829.* By ALEXANDER TWEEDIE, M.D. Member of the Royal College of Physicians of London, Physician to the Fever Hospital, &c.—8vo. pp. 204. London: Whittaker, 1830.

A RETROSPECTIVE view of the subject of fever might easily have been compiled, and would have afforded us an opportunity of displaying our research; but we believe such a labour would impart neither amusement nor instruction to our readers. The most superficial medical student cannot be ignorant of the chaos of conflicting opinions that have divided the most eminent authorities upon this

\* This may be done, in the case of a leech-bite or of venesection, if necessary, by taking up a small portion of the integuments by a mere stitch with a needle and silk.

important subject. Fever, indeed, has been to physicians a Gordian knot, which has frequently been rudely and hastily divided, but which has never been satisfactorily disentangled. We shall not even endeavour—*tantas componere lites*, but proceed at once to an analysis of the works before us. If we indulge in a longer article than usual, we are certain that our readers will freely admit our excuse, on account of the great interest which appertains to the subject discussed, and the strong claims which the authors have to our very deliberate attention. There is but one point respecting fever concerning which there is no disagreement. By all a knowledge of its phenomena, and of the influence which certain modes of treatment exert in modifying or subduing them, is deemed absolutely necessary for every practitioner who would perform his duties with credit to himself or advantage to his patients. In our notice of the volumes before us, we shall place in contact the opinions of the authors when they support each other, as well as when any difference of opinion exists between them. By this plan our readers will be put in possession of the pathological or practical points which are confirmed by both, and they will at the same time perceive any discrepancies which may obtain between two able and careful observers, who write from the same field of experience. It may be proper to observe, that we have placed the works at the head of this article in the order in which we received them, and that the one does not take precedence of the other from any acknowledged and evident superiority.

Dr. SMITH informs us in his preface, that his work is wholly of a practical nature; its object is to ascertain the real phenomena of fever, and the most safe and effectual treatment of the disease. On looking over the account which he has given of the phenomena, he finds that he has omitted to mention the peculiar odour which belongs to a fever patient. "It is so characteristic, that a person familiar with the disease might in many cases be able to pronounce, merely from the odour of the effluvia that arises from the body, whether the disease were fever."

Dr. TWEEDIE also introduces us to his work with the assurance that he has confined himself as much as possible to facts, and if at any time he has been led into digression, it has been solely with the object of elucidating some point of practical importance. The practical inquirer need not apprehend, then, that he will be involved in the mazes of speculative fancies by either of our authors. He will sit

down to the study of their volumes with the certainty of deriving from them useful instruction.

On the appointment of Dr. Smith to the office of physician to the London Fever Hospital, it was stated to him that, among the objects contemplated by the establishment of this institution, two things were conceived to be of paramount importance: first, the accumulation of facts by which the true nature of fever might be more certainly ascertained; and secondly, the cautious trial of remedies by which a more sure and successful mode of treating this fatal disease might be discovered. During his connexion with the hospital, he has faithfully endeavoured to keep these laudable and important objects in view.

The London Fever Hospital is capable of receiving sixty-two patients. In most seasons of the year its wards are full, and often, observes Dr. Smith, there are numerous applications for admission, which cannot be received for want of room. From six to seven hundred patients annually pass through the wards. Dr. Tweedie states that the total number of cases rejected in 1826 for want of accommodation in the hospital, was upwards of seven hundred. In a country where the hand of charity is so liberally opened, it is astonishing that a more capacious institution for fever patients has not been established.

After some preliminary observations in proof of the necessity of still further investigating the subject of fever, on account of the perplexing diversity of opinion respecting both its pathology and treatment, Dr. Smith gives a rapid sketch of the ancient and modern doctrines relative to the nature and seat of the disease. The slightest glance, he says, at the history of these doctrines from remote antiquity, and more especially a consideration of the variety, and even the contrariety, of the opinions respecting both the nature and seat of fever which are received at the present day, but too clearly show that, if the ancients were in error, there cannot be many points with regard to which the moderns are right, since there is scarcely one in which they are agreed. We must presume our readers to be acquainted with the doctrines of Cullen, Brown, Stoker,\* Burne, Clanny, Clutterbuck, and Broussais, and shall,

\* It was originally our intention to have given a sketch of Dr. STOKER'S last work together with the analysis of Dr. Smith's and Dr. Tweedie's, but as we found, upon perusing it, that neither the pathological doctrines it contains, nor the plan of treatment described in it, could be applied to the fevers of London, we have postponed our notice of it for a future Number.—EDITOR.

therefore, pass over the brief notice bestowed upon them by Dr. Smith. The comments he makes upon the errors which are common to all these theorists, are eloquently and acutely penned.

“The believers in debility derive their notion of the whole disease from the phenomena which occur in the first and last stages only: in these, it is true, they may find abundant evidence of debility; but then they overlook the intermediate stage, in which there are generally the most unequivocal indications of increased sensibility in the nervous and increased action in the vascular systems: in this manner they characterize the disease by what appertains only to certain stages of it. Again, when they contend that debility is not only the essence of fever in general, but is really characteristic of every type of it, they affirm what is indisputable of fevers in particular seasons, in particular climates, or in particular constitutions; but beyond this their generalization cannot be extended: in this manner they assign to the genus what belongs only to the species. And when Cullen goes on to affirm that the proximate cause of all the morbid phenomena is a ‘spasm of all the extreme vessels,’ he commits the additional and more palpable, but not less common error, of assigning as an undoubted fact, as a real and ascertained occurrence, what is only a conjecture, and for which there is not, and for which he does not even attempt to adduce, the shadow of evidence.

“Precisely similar to this is the error of those who for the most part belong to the same school, and who attribute the essence of fever to a morbid condition of the blood. The blood may be diseased in fever; but if it be so, these writers do not *know* it, or at least they do not adduce any evidence that they are in possession of such knowledge; they do not appear so much as to have questioned chemistry; at all events, it is certain that they have hitherto received no satisfactory answer. There is no evidence on record that the alleged determination of the blood takes place in every type and every degree of fever; and if there were, it would still be but one event among many, and one that occurs late in the series, and therefore could possibly be nothing more than an effect.

“In like manner, those who maintain that inflammation of the brain is the sole cause of fever, assume as an established and admitted fact, the universal and invariable existence of inflammation of the brain in this disease. Inflammation of the brain, without doubt, is demonstrable of many individual cases, and of some whole types; but beyond this there is no proof that the generalization can be carried. The evidence, indeed, in regard to many cases, is entirely against the assumption, and is as complete as negative evidence can well be: consequently, it must be admitted that even this hypothesis, in the present state of our knowledge, is founded on the error of assigning to the whole genus what belongs only to particular species; and it would be trifling with the

reader to attempt to prove that this is still more certainly and strikingly true with regard to inflammation of the mucous membrane of the stomach and intestines; an affection which, in innumerable cases in which its existence is certain, clearly appears, on the slightest examination of the succession of events, to be an effect and not a cause." (*Dr. Smith*, p. 31.)

**Dr. Tweedie** is also opposed to the doctrines which teach that an altered and vitiated state of the blood constitutes the essence of fever.

"Not only is the condition of the blood changed in typhous fever, but, as a consequence of this morbid state of the blood, the secretions are more or less vitiated. Hence the clammy, disagreeable condition of the mouth, the depraved taste, the dry sordes on the teeth and lips, the brown or black incrustation of the tongue, the peculiar smell from the body, which is easily recognised by those who have much experience in fever; while the excretions are much more fetid than in any other disease of a febrile nature.

"These morbid changes are evidently produced by the action of the febrific poison on the brain and nervous system, and not by its primary operation on the fluids: in this view alone are the principles of the humoral pathology at all applicable to the phenomena of fever in general." (*Dr. Tweedie*, p. 50.)

From **Dr. Burne**, some of whose opinions we think are not likely to make many proselytes, he also differs.

"If the term adynamic fever, which, to borrow **Dr. Burne's** own definition, 'means a state of debility, from a depression or prostration of the powers of the nervous and muscular systems, not ordinary debility, as from loss of blood, or from wasting of the physical powers,' be intended to include the putrid, malignant fever of Sydenham; the slow, nervous fever of Huxham; the nervous fever of common language; the synochus, typhus mitior, and gravior of Cullen; the jail and hospital fever; the *fièvres essentielles* of the French; the epidemic of the Irish writers; the contagious of Bateman; the typhus of **Dr. Armstrong**; and the proper idiopathic, a common fever of **Dr. Clutterbuck**, the description of fever which he has given should have included all those various and opposite forms, which are in many respects very different in their nature, and require each an appropriate, and in some measure opposite, mode of treatment. But when a description of the symptoms of all these varieties is blended, with the view of showing that the adynamic form is the prevailing character of the fever of this metropolis, I feel it my duty to state that, however well **Dr. Burne** has described one variety, his description by no means applies to the ordinary fever of London." (*Dr. Tweedie*, p. 52.)

The frequent and formidable disease, in the investigation of which we are entering, cannot be understood, says **Dr.**

Smith, until clear and exact answers are obtained to the following inquiries.

"1. What is the series of phenomena which constitutes fever? 2. What are the particular phenomena which are common to all its varieties and combinations? 3. What is the order in which these phenomena occur in the series? 4. What are the organs, and what their states, upon which these phenomena depend? 5. What are the external signs of these internal states, or what are the indications by which their existence may be known? 6. What is the external noxious agent or agents, or the exciting cause or causes of the disease? 7. What is the particular remedy, or the particular combination of remedies, which is best adapted to each state of each organ?" (*Dr. Smith*, p. 33.)

Our first duty is to ascertain the concurrence of symptoms, and the second to determine the order in which they occur.

"When these two points have been made out, what is essential and what adventitious, as well as what is the cause and what the effect, becomes at once clear and certain. But the difficulty lies in discerning, amidst the infinite diversity and contrariety of symptoms which the different modifications of fever present, when we may safely assure ourselves that we are in possession of all the essential phenomena. Our guide is invariableness of concurrence. If we can ascertain that a certain number of events invariably take place in every form and every degree of fever, these events will give us the particular phenomena which are common to all the varieties of the disease. If we can further ascertain that these events invariably concur in a certain order, we shall have discovered what events bear to each other the relation of cause and effect. And the establishment of this relation of events, this constant connexion with each other, this uniform antecedence and sequence, appears to me to be the only theory after which it is consistent with the principles of sound philosophy to search." (*Dr. Smith*, p. 36.)

If Dr. S. has endeavoured to establish this connexion, and has thus ventured, as we conceive with him, in a strictly philosophical sense to propose a theory, in doing so, he has carefully restricted himself to the attempt to deduce a legitimate conclusion from facts previously ascertained.

Chapter II. Dr. Smith proceeds to point out the various appearances presented by fever under different circumstances, and in different climates. If this fact, which it would scarcely be supposed could ever have escaped the notice of the most superficial observer, had been duly attended to by many writers upon the subject, the perplexities which have arisen from their attempts to draw a general description of fever from particular epidemics, or a few insulated cases, would have been entirely avoided.

"Something there is, however, which, amidst this astonishing diversity, preserves the identity of the disease so completely and so obviously, that there never has existed any dispute about that identity, under any aspect which it has hitherto been observed to assume; so that all physicians, without exception, unhesitatingly accord the name of fever to the mildest form of the common fever of this country, to the yellow fever of the West Indies, and to the plague of Constantinople and of Egypt." (*Dr. Smith*, p. 42.)

If three persons, each exhibiting an exquisite specimen of one of these several forms of the disease, were brought into the same ward of an hospital, the external aspect presented by each would be so different, that an unprofessional observer would probably be able to discover, in these modifications of the same malady, no common property; yet there is no physician who would not, in each case, instantly pronounce the disease to be fever.

"There must, therefore, be something that establishes the identity of the disease under this diversity of aspect. What is that something? Whatever it be, it must be common to all the varieties of fever. Thus we are led at once to the second inquiry which we proposed to keep before us in this investigation, namely, what are the particular phenomena which are common to all the varieties and combinations of the disease?" (*Dr. Smith*, p. 43.)

Fever, it must always be remembered, is not an entity, not a being possessing a peculiar nature; and the object of investigating it is not to discover in what such nature consists, or what it is that constitutes its essence; "but fever is a series of events, and the object of inquiry is to discover what the events are; what the events are that invariably concur in the series; and in what order they constantly succeed each other." (*Dr. Smith*.) It is not, however, the invariable concurrence of a particular number of events that is alone sufficient to constitute fever: to this must be added invariableness of concurrence, in a particular order.

"The order of events then is, first, derangement in the nervous and sensorial functions; this is the invariable antecedent: 2dly, derangement in the circulating function; this is the invariable sequent: and 3dly, derangement in the secreting and excreting functions; this is the last result in the succession of morbid changes." (*Dr. Smith*, p. 50.)

"Every one who has attentively studied the order of invasion of the symptoms, and more particularly those who have had personal experience of fever, must be satisfied that the brain and nervous system are early and primarily engaged in the febrile action; the disturbance in the brain is, in the beginning, simply functional, though it may, sooner or later, according to particular circumstances, assume an inflammatory character.

"The circulation next partakes in the disorder: there is generally, though not invariably, quick pulse and heat of skin, to which, as a consequence of the previous condition of the sensorium, succeeds a vitiated state of the secretions. Hence the furred tongue, thirst, depraved taste, and turbid urine, observed in fever." (*Dr. Tweedie*, p. 6.)

No other disease exhibits, says Dr. Smith, the same train of phenomena in the same order of succession. "In inflammation some of the phenomena are the same, but the order in which they concur is not the same; and this affords a clear and universally applicable mark of distinction between fever and inflammation." In inflammation, the earliest indications of disease that can be discovered have their seat in the affected organ itself. We admit the correctness of the distinction laid down by Dr. Smith between fever and inflammation, but it unfortunately happens that, in the great majority of cases, the practitioner cannot trace the different order in which the characteristic phenomena occur. He very rarely sees his patient early enough after the first attack of disease to enable him to determine, with any degree of confidence, whether fever or local inflammation constituted the primary malady. Dr. Tweedie observes, that it is important to remark that many patients admitted into the hospital had been, for a long period previous to the attack of fever, the subjects of incurable organic diseases, upon which fever had supervened.

"There is another description of cases which are not unfrequently received, viz. cases of neglected inflammation of some important organ, of which the fever is merely symptomatic. These cases are by no means easily discriminated from idiopathic fever, during the progress of which some organ has become inflamed: the obscurity arises from the impossibility, in most instances, of obtaining a correct history of the early symptoms; the difficulty, in all cases of complicated fever, being to trace out and determine whether the fever is primary, or symptomatic of some local affection." (*Dr. Tweedie*, p. 20.)

No speculative attempts are made by the authors to determine the proximate cause either of fever or inflammation. Dr. Smith very truly states, that what the physical and the physiological condition of the organs is, as contrasted with their condition in a state of health, has not yet been made out with regard either to fever or inflammation.

"What inflammation is beyond the series of events we are able to observe, we do not know; what fever is beyond the series of events we are able to observe, we do not know. we compare the events, and we see that they differ; and, since the use of names



is to mark and to express differences, it is right to distinguish these different events by different terms. But though, in the present state of our knowledge, we are not justified in considering fever and inflammation to be the same, yet the close, perhaps the constant, connexion between them, is a fact of the utmost importance to be known, and requires to be incessantly before the view of the practitioner; and of this we shall have but too abundant evidence in the sequel." (*Dr. Smith*, p. 52.)

Out of the system of organs that are always affected in fever, some may be more and some may be less diseased; and it is easy to see how, from this diversity alone, the utmost variety may arise in the external characters of the disease. At one time the spinal cord and the brain may be intensely affected, and pains in the limbs, ferocious headache, early delirium, may occur. "Or, on the contrary, all the muscles of voluntary motion may be seized instantaneously with such a loss of energy, that they may truly be said to be paralysed." (*Dr. Smith*.) This statement is no doubt founded upon observation, but it has not fallen to our lot to witness any such "instantaneous" loss of muscular energy in fever cases. Dr. Tweedie expresses his surprise that, from the frequent occurrence of symptomatic inflammation of the brain in the more acute as well as chronic forms, that palsy so rarely follows. At another time the disease may seize with peculiar violence upon the organs of secretion, the digestive organs in particular.

"When the spinal cord and the brain are so violently affected that the patient appears to be struck with paralysis or apoplexy, the attention is not strongly drawn to the state of the mucous membrane of the digestive apparatus; to the nature of the secretions and excretions of which it is the source; to the temperature of the system, or to the condition of the circulation; because the affection of the nervous system being overwhelming, and all the other affections being comparatively trifling, it is natural that the former should, in a manner, absorb the mind of the observer; yet if the skin, the pulse, the tongue, the evacuations, are examined, all will be found to be in a morbid state, and that morbid state will bear a certain proportion to the affection of the nervous system." (*Dr. Smith*, p. 55.)

"There is another point connected with the state of the brain in fever, to which I wish to call more particularly the attention of those whose opportunities of treating the disease are limited, viz. that when some other organ becomes inflamed in the course of the febrile action, the symptoms are more or less obscured by the cerebral affection.

"It is in this way that symptoms in the chest, for example, may be entirely overlooked; and in the absence of cough, and of any

disorder in the respiration, there is nothing to lead even to the suspicion that there is mischief going on. The condition of the brain is the cause of this obscurity, and it is in such cases of latent pulmonary disease that the stethoscope is of unquestionable diagnostic value." (*Dr. Tweedie*, p. 31.)

Retention of urine may be ranked among the paralytic affections depending on the condition of the brain in fever. In various diseases of the head, the bowels are with difficulty stimulated by ordinary aperients, and therefore the more active kinds are required.

"From an inactive state of the muscles concerned in the expulsion of the urine, accumulation in the bladder often takes place; so that, in all cases of severe sensorial disturbance, the region of the bladder should be examined at each visit, as I have often seen great additional irritation arise from this cause. I have known a practitioner thrown off his guard completely by the patient passing small quantities of urine unconsciously, which not unfrequently happens when the bladder is over distended. Appropriate measures should be adopted before such an accumulation takes place, as it not only proves a source of distress, but the sudden removal of so large a quantity by the catheter in the advanced stages of fever, is sometimes followed by an alarming collapse, from which it is not easy to rouse the patient." (*Dr. Tweedie*, p. 32.)

In fever, as in other diseases, the greatest diversity of symptoms may arise from different degrees of the same affection of one and the same organ.

"One degree of affection of the brain, for example, will occasion violent headach, constant watchfulness, great restlessness, a peculiar expression of the eye, and intolerance of light; in another there will be no headach, or none of which the patient will complain; there will be sleep, though it be disturbed and unrefreshing; there will be no peculiar expression of the eye, and no intolerance of light. By one degree of affection, the sensibility will be rendered preternaturally intense; by another, it will be totally obliterated: one will produce violent delirium, another only slight wandering, or unrefreshing slumber; one, violence requiring restraint; another, profound coma. In the circulating system the symptoms will alike vary. One degree will produce a quick, strong, and hard pulse; another, a quick, small, and feeble pulse; another, a slow and intermittent pulse. A similar diversity will be found in the temperature of the body: in one, the heat will be little changed; in another, it will be below the natural standard; in a third, it will be intense, and the organs of secretion and excretion will equally vary in the extent of their morbid changes." (*Dr. Smith*, p. 57.)

When to this variety are added diversities occasioned by various stages of the diseased processes that are going on in

the system; by the previous state of the organs affected; by the reaction of the affected organs one upon another, producing innumerable and ever-varying combinations of different intensities of affection, in different sets of organs; and by the treatment to which the whole have been subjected, we cannot wonder if the symptoms of fever appear to be countless.

"That no two cases of fever can ever be precisely the same, and that it must be vain to seek for the common phenomena of the disease in the external symptoms, must now be obvious; and why success can never attend the search after these common phenomena in such symptoms as 'shivering, frequent pulse, heat,' must be equally manifest. These, as well as all other symptoms, depend upon the state of the organs." (*Dr. Smith*, p. 58.)

The division of febrile diseases into idiopathic and symptomatic, is condemned by Dr. Smith. It is liable, he contends, to the fundamental objection that the diseases included under the second section are not fevers, but inflammations. He admits no fevers but idiopathic fevers.

Upon the subject of simple or idiopathic fever, Dr. Tweedie speaks with some hesitation.

"I am aware that many distinguished pathologists not only doubt, but positively deny the existence of what has been termed simple fever, that is, fever without evident symptoms of local inflammation. On this point, I may state that I have daily opportunities of observing cases, which correspond with the description of the simple fever of many writers, in which there is no preponderance of action in any organ that can be detected by symptoms; but when we recollect how often organic disease steals on, undetected by diagnostic signs, how much we are at times deceived by latent local diseases, the condition of the organs in what is termed simple fever, requires minute diagnostic investigation.

"Of the whole number of cases which occurred at the hospital within the period of this report, more than one hundred came under the description of simple fever; that is, the disturbance in the system was general: there was no evidence by symptoms of affection either in the head, chest, or belly.

"The character of this class of cases was, increased heat, accelerated pulse, thirst, and general functional disorder." (*Dr. Tweedie*, p. 26.)

Broussais, with his characteristic dogmatism, asserts "that a case of fever never has been, and never *will* be, seen, in which all the tissues of the body are equally affected."\* In other words, that there is no such disease as simple or idiopathic fever. What other practitioners may have seen,

\* *Examen des Doctrines Médicales*, &c. tome ii. p. 399. Paris, 1821.

or what we may in future see, we will not venture to determine; but we certainly have never yet seen a case of fever in which there was not sufficient evidence that the preponderance of disease was borne by some one organ of the body.

Dr. Smith deals very freely with the received nosological arrangements of fever.

"The more we investigate the subject, the more satisfied we shall become that continued fever is one disease, and only one, however varied, or even opposite, the aspect it may present; but that it differs in intensity in every different case, and that this, and this alone, is the cause of the different forms it assumes. Many of these diversities it would be frivolous to distinguish; some of them, on the other hand, it is of the highest importance to discriminate. For all useful and practical purposes, it is necessary only to arrange the different assemblages of symptoms into two great classes, the one comprehending the mild, and the other the severe, forms of the disease. All the forms that continued fever can assume, and all the individual cases that can occur under either, must be mild or severe, and therefore must readily find its place under one or other of these divisions. The only real difference in the disease being a difference in degree, it is proper that the principle of the division by which the varieties it presents are classified, should be founded on this, the only true distinction of which it admits." (*Dr. Smith*, p. 71.)

We should object decidedly to simplicity of arrangement, if it were obtained at the expense of accuracy; but we are convinced Dr. Smith is correct in this statement. Various other practical writers have arrived at a similar conclusion. As one example, we may cite Dr. O'REARDON, whose opinions upon this subject we lately extracted from his Report of the Fever Hospital of Dublin. "The divisions of fever (says Dr. O'R.) designated in our classic medical works by the appellations of Synocha, Synochus, Typhus mitior, Typhus gravior or putridus, Febris biliosa, Febris nervosa, and Febris maligna; and which Pinel terms *Fièvre angiotonique ou inflammatoire*, *Fièvre meningo-gastrique ou bilieuse*, *Fièvre adenomeningée ou muqueuse*, *Fièvre adynamique ou putride*, *Fièvre ataxique ou maligne*: all these divisions are, I venture to say, mere variations of one genus constituting fever; varieties produced by the diet, occupation, locality, temperament, habit of body, state of mind, or nervous condition of the patient; or by an alteration in his biliary or other secretions; or by the period of the fever, or its treatment; or by the season of the year, the climate, or constitution of the atmosphere."\*

\* London Medical and Physical Journal, August 1829, p. 172.

Dr. Smith adopts two words from the nosology of Cullen, and employs them merely to express differences of degree relative to one and the same disease. The mild degree he terms Synochus, by which is implied the ordinary form of fever in this metropolis, and even in this country. The severer form is designated Typhus. "Each will be found to present a distinct assemblage of symptoms; each will be found to depend upon a particular condition of certain organs; each will be found to require a peculiar treatment." (*Dr. Smith.*) To distinguish further important differences, which bear an important relation to practice, each of these two great classes is divided into two minor sections. Synochus into *s. mitior* and *s. gravior*; and typhus into *t. mitior* and *t. gravior*. Dr. Tweedie divides continued fever into simple, complicated, and typhus. Dr. Smith thinks that his principle of arrangement might be extended with advantage to the exanthemata, and all the forms of fever which have hitherto been known to exist, or which can arise.

In the third chapter, Dr. S. enters into a detailed account of the successive phenomena which constitute synochus mitior, and the indications afforded of disease in the nervous, circulating, and excreting systems. The progress of disease, consisting in progressive increase in the derangement of these functions, the phenomena of recovery, and in what circumstances depends the transition of synochus mitior into synochus gravior, are also described. The classification must be according to the different organs in which the several affections have their seat. Hence synochus gravior, with cerebral affection, subacute, acute; with thoracic affection, with abdominal affection, with mixed affection.

Having most accurately described the succession of phenomena in synochus mitior, Dr. Smith next enters upon the important subject of synochus gravior with cerebral affection, which occurs under two degrees of intensity: when the cerebral affection is moderate, it may be termed subacute; when great, acute. He particularly insists upon the utmost vigilance in watching the insidious approach of these cerebral affections. He who looks for intense pain, and suspects no cerebral affection, unless accompanied with this symptom, will be surprised at the sudden occurrence of new symptoms, which will at length open his eyes to the danger of the case. "The warning (says Dr. S.) was given, but the sign was not understood."

It is not uncommon for the most unequivocal and exten-

sive changes of structure to take place in the brain and its membranes, without severe pain having ever been felt. Pain, however, though it be not great, is almost always present.

“Now and then no pain whatever is felt. Question the patient as much as you please, and he will tell you that he never has felt any pain. In this case giddiness is the substitute. Giddiness in the commencement and in the early stage of fever, is as certain a sign of cerebral affection as pain. Striking illustrations of this are afforded by several cases detailed in the pathology; by consulting which, the reader will see that precisely the same morbid changes take place in the structure of the brain, although nothing but giddiness be complained of, as occur in those which are attended with the acutest pain. The practitioner will therefore fall into a fatal error who is seduced into security because pain is absent; and who neglects the remedies proper for inflammation of the brain, because the patient complains only of giddiness. If giddiness be combined with pain, or alternate with it, which is not uncommon, the giddiness being slight if the pain be severe, and the pain being slight if the giddiness be distressing, it indicates a more severe affection than if either exist alone.” (*Dr. Smith*, p. 98.)

The dull and heavy expression of the eye, when there is an accompanying cerebral affection, is greater than in the milder form of fever. There is usually a corresponding increase in the general sensibility. A loud noise is invariably distressing to the patient. Exposure to a glare of light and a loud noise may alone rapidly change a slight into the severest cerebral affection. As long as the pain, the giddiness, and the increased sensibility continues, there is invariably a want of sleep. At the close of this train of symptoms, delirium sometimes occurs. It is seldom violent or long continued; but, when present, is like the talking of a person during sleep, in a disturbed dream. The pulse, during all this time, may not be much quicker than in the mild form. These symptoms of prominent affection of the brain continue without intermission, and with little change, for several days. An entirely new train of symptoms then supervenes, which presents a striking contrast according as the patient is destined for life or death. These opposite symptoms, which are of so much consequence as guides to our prognosis, are minutely described by *Dr. Smith*. When synochus gravior is accompanied by acute cerebral affection, the history is precisely the same, excepting that the symptoms are more severe, and their progress quicker. The slow and intermitting pulse *Dr. S.* considers very characteristic of an exceedingly acute attack of cerebral disease.

"Whenever, in the onset of fever, a patient is found with intense headach, or intense pain in the back and loins, and a slow pulse, the physician ought to be greatly alarmed at the severity of the symptoms that are to follow; and if he do not take the most active measures to break the violence of the disease at this early period, it will be beyond all control in a day or two, and the patient will be dead before the fever is well formed in milder cases." (*Dr. Smith, p. 109.*)

The case of Dr. Dill is adduced as a proof that pain of the head is far from being the first symptom that occurs in the most intense cerebral attack. We recently attended a young lady who had apparently enjoyed the most perfect health until within a month of her death. She complained only of slight pain in the head, which usually occurred after dinner. Upon dissection, the dura mater covering the left hemisphere of the cerebrum was found extensively ulcerated, with thickened and hardened edges. In this instance severe cerebral disease must have been proceeding for some time, without any symptoms that are usually considered indicative of such an affection. Dr. ABERCROMBIE, in his valuable Treatise on the Pathology of the Brain, mentions many similar examples of the occasionally insidious progress of diseases of the brain. To illustrate each form of synochus which has been described, Dr. Smith relates several cases.

Dr. Tweedie makes the following important remarks upon affections of the brain in fever.

"Of the 521 cases, 114 had well-marked symptoms of severe cerebral affection, indicated by one or more of the following symptoms: pain, giddiness, sense of weight or fulness, watchfulness; and in the advanced stages, delirium, coma, spasms, or more rarely convulsions. This latter symptom was observed in four patients only, and of these, two had been previously subject to occasional attacks of epilepsy. One or more of these symptoms showed that the brain was seriously involved in the febrile action. The danger of the case depended on the extent of inflammation, the treatment which had been adopted, and its effects on the disease; for when the proper stage for active treatment had been allowed to pass over, the hopeless signs of neglected cerebral inflammation left little to be done but to pronounce the fatal issue of the disease.

"In a large proportion of the cases, the condition of the brain constituted only part of the danger, other organs being at the same time inflamed; for example, in 26 the head and chest, in 30 the head and belly, and in 14 the head, chest, and abdomen, were simultaneously affected.

"It appears that in 184 the brain was seriously involved in the

febrile action; and, on referring to the table I have drawn up of the morbid appearances observed in the fatal cases, it will be seen that, in 37 out of 54, (the whole number examined,) the brain showed evident marks of the existence of previous inflammation.

"In fourteen of the fatal cases, there were no traces of any disease in the brain or its membranes. In these, destructive inflammation of some other organ, which had supervened in the course of the fever, was the immediate cause of death." (*Dr. Tweedie*, p. 28.)

In the next sections, Dr. Smith describes synochus gravior with thoracic and abdominal affections, and gives some cases as examples of these forms of disease. Under the head of Synochus gravior with mixed affection, Dr. S. includes those cases which are neither in an exquisite degree cerebral, thoracic, nor abdominal, but which at one and the same time afford the most exquisite specimens of all the three.

"From this account of the sense in which the term is employed, it must be obvious that it will include the severest cases that can occur. If a patient be affected with intense cerebral disease, he may be in great danger; but if he be affected with an equally intense thoracic disease, his danger must be doubled; and if to this be added an equally intense abdominal disease, it must be trebled. And accordingly these are just the cases which bid defiance to the most skilful and vigorous measures which the medical art can employ to control them; which seize upon their victim with a force which no human agency can resist nor counteract; which in malignant epidemics destroy life in a few hours or in a single hour, and in ordinary seasons in a few days." (*Dr. Smith*, p. 143.)

We doubt whether these mixed cases are usually the severest. It has appeared to us that in fever cases, where several organs were attacked, that neither was so intensely affected as when one organ alone bore the whole violence of the disease, and that consequently the danger was diminished. Dr. CRAMPTON also expressly states that "where a number of important organs were pressed at the same time, as the brain, the lungs, and the stomach, the danger was less than when the whole force of the disease fell upon one, with undivided and concentrated violence. In such cases, provided patients were admitted at early periods, it was satisfactory to see the advantages resulting from an active and energetic practice, and how soon they became convalescent."\*

*Of Typhus.* Under this term Dr. Tweedie includes,

\* Medical Report of the Fever Department in Steevens' Hospital, from 1817 to 1819. By JOHN CRAMPTON, M.D.



" those fevers in which the brain and nervous system are early and severely affected, accompanied with symptoms denoting a morbid condition of the mucous membrane and skin, and a tendency to what is known by the term putrescency. This tendency is indicated by the condition of the blood, especially in the advanced stages; the crassamentum of which; instead of forming a firm coagulum, is loose, small in proportion to the quantity of serum, and so soft that it breaks readily on attempting to raise it, resembling in consistence half-boiled currant jelly. In some instances, I have observed that, when blood has been abstracted late in the disease, it scarcely coagulated at all." (*Dr. Tweedie*, p. 49.)

Dr. Burne has drawn a very good description of this fever, but he has given an impression that the simple typhus, or adynamic fever, is the general character of the common, continued, or epidemic fever of London. From this opinion Dr. Tweedie dissents, and in our opinion very justly. Dr. Smith considers that the difference between synochus and typhus arises entirely from a difference in intensity, but that still this difference produces a very important modification in the character of the disease: important because it materially affects both the safety of the patient and the nature of the remedies that are best adapted to rescue him from his danger. Typhus, like synochus, presents itself under two degrees of intensity, which, like those of the latter, Dr. S. designates by the terms mitior and gravior. All the important symptoms which belong to both are found in the same cavities, and relate to the same organs, as in synochus, and therefore must in like manner be divided into cerebral, thoracic, and abdominal. Dr. Tweedie states that typhous fever may be simple, that is, uncomplicated with inflammation in any of the organs, like the more common varieties of epidemic fever: however, it "very often," in its progress, becomes complicated with local congestion or inflammation, either in the brain, chest, or belly. For the term "very often" we should be inclined, from our own observation, to substitute "almost always:" we believe that cases of simple typhus, or of Dr. Burne's *simple adynamic fever*, both which expressions imply fever unaccompanied by organic inflammation, are extremely rare.

Dr. Smith has seen no example of typhus gravior in London. He has witnessed nothing bearing a tolerable resemblance to this disease, even as it is depicted by Cullen; much less as it is portrayed in the darkly vivid, yet apparently but too faithful colouring of Huxham. All the examples of fever which approach in likeness to the descriptions on record of typhus gravior which he has seen,

have consisted of the mixed cases of typhus. They have been cases in which the brain, the lungs, and the intestines, were all simultaneously and intensely affected. Such cases Dr. Smith considers referrible to two classes; one in which the arterial action is excessive, the other in which it is oppressed, or rather overwhelmed.

“ 1. In the first, the patient lies insensible, with delirium perhaps so violent that he cannot be kept in bed without restraint; with extreme restlessness and constant watchfulness; with rapid and panting respiration; with a tender abdomen, perhaps with frequent and involuntary stools; a dry, black, and hard tongue; a quick, yet weak pulse; and the skin universally and pungently hot.

“ 2. In the second, he lies insensible, with a cold and dusky skin; with a swollen and livid countenance; with a heavy and oppressed respiration; with a pulse perhaps not to be felt, or, if distinguishable, either so rapid that it cannot be counted, so small that it is like a thread beneath the finger, and so weak that it is lost by the slightest pressure, or else slow, irregular, and intermittent. In this state, the patient is almost as completely paralysed as in apoplexy, and the attack is almost as rapidly fatal as apoplexy. It constitutes what has been called congestive fever. (*Dr. Smith*, p. 163.)

Fortunately these intense forms of disease are rare; they are witnessed only in solitary instances. Dr. S. combats with energy the dangerous notion that such cases form exquisite specimens of diseases of debility. Where, he asks, is the debility?

“ Not in the disease, for that is of giant strength; not in the patient, for remove, if you can but remove, a part of the load that oppresses him, and instantly an intensity of action will be set up in the whole system, perhaps as great as it is capable of exerting, and certainly greater than it is capable of sustaining without the most imminent danger. The brain is overwhelmed by the intensity of its affection; the energy that should animate the system, and of which it is the great source, is withheld: but that energy is suspended, not destroyed; and the debility which seems to be the result is not real, but apparent, not direct, but indirect. The giant that lies prostrate on the earth, mastered by superior power, has still a giant's strength, though he do not at that moment put it forth: give him but the chance of throwing off the load that keeps him down, and he will soon show you that he is not weak.” (*Dr. Smith*, p. 164.)

We are convinced, with Dr. Smith, that no doctrine can be more fatal, if indiscriminately applied, and if taken as a guide for our general practice, than that which would lead us to attribute these congestive forms of fever to debility. But we are also convinced that cases do occur in

which the smallest quantity of blood cannot be safely abstracted. Dr. Tweedie relates a case in point.

"In this patient, the description of fever was purely adynamic: the most remarkable features were, the greatest muscular prostration, with nocturnal delirium, so that she lay sunk in the bed, passing her stools involuntarily without the slightest pain, or any symptoms of local disturbance. It was necessary, in the very first stage of the disease, to administer wine and stimuli very freely; under which treatment she slowly, though eventually, recovered; but her convalescence was retarded by that peculiar swelling of the lower extremity which I have described. This lady certainly was saved by liberal doses of wine; and so great was the 'tendency to death,' that for forty-eight hours it was necessary to sit by her bedside with the finger on the pulse, and to administer stimuli whenever it appeared to become soft and compressible; in fact, the heart's action seemed to be completely under the control of diffusible stimuli.

"If such treatment were applied to cases of epidemic fever in general, I need not anticipate the result; or had antiphlogistic measures been adopted in the case of this patient, I can safely say that the abstraction of a few ounces of blood, or even a brisk purgative, would have been instantly fatal. The necessity, therefore, for discrimination in the treatment of fever, is evident; for although much information and assistance may be obtained from the prevailing character of the disease, yet every individual case must be treated *per se*; with due deference to its particular and individual circumstances." (*Dr. Tweedie*, p. 53.)

We must pass over the observations Dr. Smith offers upon Scarlatina with but one comment. He states that "the depression of the nervous system so characteristic of synochus and typhus, is much less in degree in scarlatina. Neither the physical nor the mental debility is as great. In the whole attitude and manner of the patient, as well as in his own sensations, there is less prostration. The disease is more nearly allied to a pure inflammatory affection than either of the preceding forms of fever."

Such we believe to be a correct description of the ordinary character of scarlatina. But in this form of fever, as in every other, particular epidemics assume particular characters, and require a modification of the ordinary mode of treatment. The scarlatina which raged so extensively in this metropolis at the latter part of last year, was marked *from the commencement*, in many instances which fell under our own notice, by the utmost degree of mental and physical debility. In some of these cases in which even local bleeding was very moderately employed, the result was

rapidly fatal; while in others, of an apparently similar nature, carbonate of ammonia and small quantities of wine were given in the early periods of the disease, with the most decided advantage. In two of the cases to which we refer, Dr. Macleod was consulted, and can bear his testimony to the benefit of this practice. Dr. Tweedie states that he knows of no treatment in the malignant form of scarlatina that is useful. "Bloodletting; or any kind of active measures, was out of the question." Dr. Smith also remarks, that the most exquisite specimens of congestive fever which he has witnessed have been those afforded by scarlatina, and that there is no disease incident to this climate which is more alarming, more beyond the reach of remedies, or more rapidly fatal.

*Of the Pathology of Fever.* Having very minutely and ably detailed the symptoms of fever, Dr. Smith proceeds to the pathology of the disease. The external appearances of the body after death, the morbid appearances in the head, thorax, and abdomen, are described by both our authors at much length; they each relate numerous occurrences in illustration of the various morbid changes which occur in the different organs. Dr. Smith gives an example of the modifications which take place when fever proves fatal in the state of gestation. "If fever," he remarks, "attacks during pregnancy, there is the greatest possible danger of miscarriage, and the great majority of those who miscarry die." This observation is consonant with our own experience: we remember the late Dr. Thynne, to whose practical ability we are happy to offer our meed of respect, used to state in his lectures, that he never knew a woman miscarry from the shock of *any* acute disease who did not die. Having given many cases for the purpose of exhibiting a complete view of the pathology of fever, Dr. Smith briefly states the general conclusion to be derived. The account of the pathology of fever is the history of inflammation, and the description of the individual changes that take place in the organs that constitute the febrile circle, is an enumeration of various products of inflammation which are formed within them. There is scarcely a fatal case of fever which does not afford, in one or other of the organs of that circle, more inflammatory product; there is no considerable number of fatal cases which does not furnish a specimen of every inflammatory product. The same inference must be drawn for the statements made by Dr. Tweedie, and indeed it is now almost universally acknowledged by all pathologists, that proofs of inflammation are found in one or more

organs, in most cases of fever which terminate fatally. Neither Dr. Smith nor Dr. Tweedie, however, assert that inflammation alone constitutes the state of fever. They are particularly careful in pointing out the differences that exists between these two affections. Dr. Smith is not willing to admit "that the danger of the patient is always in exact proportion to the degree of the inflammation," while Dr. Tweedie is of opinion that "the danger of the patient is always in proportion to the severity of the inflammation, and to the importance of the organ implicated." We must agree with Dr. Smith that now and then the intensity of the nervous affection in fever is so great, and so rapidly destructive of life, that there is no time for an inflammatory process to be set up, much less for an inflammatory product to be formed.

"The patient is struck dead as if by lightning, or by Prussic acid, or by apoplexy. In this country, he does not actually die as instantaneously as he might be destroyed by the electric fluid or by poison, although there are countries, seasons, and particular spots, in which the concentration of the febrile poison appears to be sufficiently great to extinguish life instantaneously; and even in this country, life is sometimes destroyed by a stroke of fever as rapidly as it is by a stroke of apoplexy, when the latter does not prove fatal in the first few hours." (*Dr. Smith*, p. 326.)

In these cases the internal organs after death exhibit no signs of inflammation, unless vascularity be inflammation. The organs which in ordinary cases are inflamed, are in these cases filled with blood. Upon the subject of the pathology of the fluids in fever, it is confessed that little is known. Some experiments, however, Dr. Smith informs us have been undertaken by Mr. Cooper upon an extensive scale, from which it is hoped our scanty stock of information upon this point of pathology may be increased. That deviations from the state of health, and some of them of great importance, do take place in the fluids, and especially in the blood and the urine, is ascertained. What they are, with what degree of constancy they occur, how far they are respectively connected with the cerebral, the thoracic, the abdominal, and the mixed affections, with different degrees of intensity in these affections, and with different stages of their progress, Dr. Smith hopes at no distant period to lay before the public.

The relation between the phenomena of fever, or the theory of the disease, is discussed by Dr. Smith in his seventh chapter. The differences between fever and inflammation are particularly pointed out, and it is shewn that

"The state of the system, in the primary attack of fever, and the state of the system in inflammation, do not appear to be identical. The truth is, that we do not know what the real state of the system is in either case, but we see that the phenomena of the one differ from those of the other; to conclude, therefore, that the states are the same is not a sound induction. While, then, we are constrained to admit that we know nothing of the nature of the primary affection of the nervous system in fever, the closest consideration of all the phenomena alike constrains us to conclude, that that affection is peculiar and specific.

"This peculiar and specific affection appears to be much more analogous to the condition into which the nervous system is brought by the application of certain poisons, than to that which is proper to pure inflammation. The more closely and extensively the subject is investigated, the more clear and satisfactory the evidence becomes, that the great primary cause of fever is a poison, the operation of which, like that of some other poisons, the nature of which is better understood, and the action of which has been more completely examined, is ascertained to be upon the nervous system. How these poisons act upon the nervous system we do not know, nor can we possibly know, as long as we remain so profoundly ignorant of the nature of the action of the nervous system in the state of health.

"It may be considered then as established, that the primary morbid condition of the body, in fever, consists of an affection of the nervous system, which there is reason to believe is of a peculiar and specific nature, although that nature be at present wholly unknown." (*Dr. Smith*, p. 336.)

The second event that takes place in the morbid series constituting fever is inflammation, but it must always be impressed upon the mind of the practitioner that the inflammatory state in fever is modified by the peculiar affection of the nervous system.

"Inflammation does not lose its nature by being combined with that peculiar affection of the nervous system which converts it into fever; it only modifies its state: the remedies proper for fever do not differ from those which are effectual in inflammation; they only require to be modified in accordance with the modified nature of the disease. He who believes fever to consist of an affection of the nervous system alone, every other affection that may be combined with it being accidental, will rarely think of using the lancet: he who believes fever to consist of inflammation alone, and overlooks the presence of the nervous affection, will be apt to carry the employment of the lancet too far: he alone who embraces the view of both, brings within his own all the phenomena: he alone adopts a sound theory of the disease, and we now see that he alone is likely to be led to a sound practice." (*Dr. Smith*, p. 342.)

We can best refer to the fifth chapter of Dr. Tweedie, and the eighth of Dr. Smith, for many interesting remarks upon the causes of fever.

*Of the treatment of Fever.* We shall first give the substance of Dr. Smith's opinion upon this most important part of the subject. He believes that the only morbid condition of fever, of which we have any knowledge, and over which the medical art has any control, is that of inflammation. Again, however, he deems it necessary to repeat that febrile inflammation and ordinary inflammation are not identical, and that the difference between the two affections is such as to require a very considerable modification in the treatment appropriate to each. Although inflammation be not the primary febrile affection, as far as regards the order of events, yet it is, at least, the primary affection, as far as regards the treatment, if it be not the sole affection that admits of treatment. The remedies proper for febrile inflammation do not differ from those which are adapted to ordinary inflammation, but they differ materially in the mode in which they ought to be applied, and the extent to which they ought to be carried.

"They can be understood neither in their mode nor measure, until the following questions are determined; namely, what is the precise object that should be aimed at in the treatment of fever? What is it which it is most important to do, and which it is in the power of the medical art to accomplish? (*Dr. Smith, p. 376.*)

Fever, says Dr. Smith, cannot be cured instantaneously, but, if it come early under the care of the physician, and he know with promptitude and decision at what to aim, he will rarely fail in his efforts to secure this object. Since the various forms or type of fever differ in nothing but the degree of their intensity, in detailing the treatment it will be necessary only to state, first of all, the remedies which are appropriate to the disease; and, secondly, the modification of these remedies which may be required by the different degrees of intensity in which it is commonly found to exist. The common continued fever of this country, in its mildest form, requires little or no treatment. There is no affection of any organ intense enough to need the application of a powerful remedy. Confinement to the bed, abstraction of stimuli, fever diet, a Calomel purgative at night, followed in the morning by Castor oil, constitute the whole treatment required. Whenever the fever passes beyond this its mildest form, it becomes a serious disease, and is never for a moment to be trifled with. When the mildest case of fever passes to a severer form, the event that happens, as

has been shewn by the preceding pathology, is inflammation, rising in degree and increasing in extent, or both, in proportion to the intensity of the febrile affection. To this general law there are few exceptions. The object to be aimed at in practice, then, is to prevent or remove inflammation. If this object be not accomplished, death will take place at last, in consequence of the destruction of the organs by the process of inflammation. The grand, nay almost the only, remedy recommended by Dr. Smith is bleeding. Bleeding, he says, cannot be performed too early in fever. "The very first moment of excitement, could that be discovered, is precisely the moment when the employment of this powerful remedy would produce the greatest effect." When inflammation has actually come on, there is then not a moment to be lost. Until the inflammation is subdued, blood must not be taken; and when this is done, nothing remains to be done. The vein must be allowed to flow, and it must be opened again and again, until this object is secured. To attempt to measure the quantity of blood abstracted by drachms or ounces is wholly vain, because, if the remedy be properly employed, the quantity will vary in every individual case. After all, the quantity of blood it is necessary to abstract is not large, for smaller bleedings will subdue febrile sooner than pure inflammation. If, after the abstraction of sixteen ounces of blood at the commencement of the attack, the vascular excitement be not completely subdued, in the course of three or four hours the same quantity must be taken again; and if the next morning the excitement continue, it will probably have already passed into inflammation, and, therefore, the vein must be once more opened, and the blood allowed to flow until the pain, wherever seated, be entirely removed. Local bleeding may often complete what the lancet commenced. A due impression having been made upon the inflammation by bleeding, purgatives of Calomel and Rhubarb, followed by Castor oil and the Senna draught, are to be given, to produce three or at most four stools in the twenty-four hours: beyond this, no advantage is obtained by purging.

"Cold sponging, if the skin be hot; acidulated drink, if there be thirst; perfect quiet, a dark room, a silent nurse, affording prompt attendance, with a noiseless step, a cheerful countenance, and no words; this, together with three teacupsful of thin arrow-root or gruel, in the twenty-four hours, given in divided portions, at intervals of about two or three hours, comprises all else that will be required, or that will be useful, until the period of convalescence.



"Such is the simple, but most efficient treatment appropriate to the common fever of London, and its neighbourhood, (and I do not speak of the treatment proper for any forms of the disease as it exists elsewhere, and which I have not seen,) in its ordinary degree of severity." (*Dr. Smith*, p. 387.)

In a note *Dr. Smith* observes, that it would be trifling to spend any time in discussing the merits of saline, refrigerant, diaphoretic, antimonial, medicines, &c. If the proper treatment have not been applied, and the disease from neglect or mismanagement have been allowed to take its course, symptoms of typhus or adynamic fever arise, for the product of every fever at a certain stage of its process is adynamia. But now bleeding relieves no symptom; it increases some; and the inference is that bleeding is a most inefficient and dangerous remedy in fever.

"Of what avail can bleeding be, when the patient is brought into the condition which first excites alarm, in the case here supposed? The blood is no longer in its vessels; it is beneath the membranes, or in the ventricles, or at the base of the brain; the inflamed capillaries have done their work upon the cerebral substance and upon its membranes; and have left proof enough of their activity, in the thickening of the one, and the softening or the induration of the other. What can bloodletting do in this stage of the organs? What can shaving the head and applying cold do? What can blisters do? What can purgatives do? And above all, what can wine do? Nothing can be done; at least, nothing effectually or certainly." (*Dr. Smith*, p. 390.)

If bleeding in this state be deemed prudent, the greatest caution must guide the use of the lancet. To decide in such a case requires the nicest discernment. Instead of bleeding, under these circumstances, the proper remedy may be the very reverse. A stimulus may be requisite. The powers of life may be so exhausted by the inflammatory excitement, that, unless aid be brought to them, they will be overpowered, and sink. This is precisely the condition, and, perhaps, it is the only condition under which stimuli are really beneficial in fever. Of all stimuli, wine or brandy is the best. If the stimulus be capable of doing good, some improvement in the symptoms is commonly perceptible in a few hours after it is first administered. No certain indication for the administration of wine can be drawn from one or two symptoms alone. There is an aspect about the patient, an expression in his countenance and attitude, in the manner in which he lies and moves, that tell the experienced eye when it is probable that a stimulus will be useful. There is a condition of the system

in which an opiate puts a stop to a state of exhausting agitation and restlessness, procures sleep, and lessens delirium. But no kind of opiate ever proves beneficial when the chin is very hot, the tongue very dry, or the general motions and actions of the patient are violent. When the inflammatory action has terminated in some change of structure, probably accompanied with as copious effusion as indicated by the symptoms detailed under the cases of cerebral affection, advantage is sometimes obtained by affecting the system with mercury. Two grains of calomel with half a grain of opium should be given every three, four, or six hours. Some modification of the more powerful remedies will be necessary, as the prominent affection may have its seat in the brain, the lungs, or the intestines. When the attack commences with severe cerebral affection, the bleeding must be proportionally large, and early as it is copious. The "cold dash," when added to the use of the lancet, forms, by the combination, a treatment so powerful and efficacious, that it might render death from the acutest cerebral inflammation as rare as recovery is at present.

The mode of applying it is to pour upon the naked head of the patient a steady but continued stream of cold or iced water, from a wateringpot without the rose, the stream being made to fall as nearly as possible upon one and the same spot. At first the elevation must be slight, for the shock is too violent if the stream be poured at once from the highest point. "Employed as a remedy, there is no degree of burning heat which the animal economy is capable of producing, no intensity of vascular action, and no violence of pain, that can resist its continued application." Three or four repetitions will commonly suffice to subdue the most intense cerebral affection. In the case of Dr. Dill, the relief it brought was instantaneous and most complete.

In the severe bronchial affection of fever, bloodletting is of little avail. It weakens the patient, without making a decided impression upon the disease. Tartar emetic seldom fails, if exhibited with promptitude and decision. It should be given in doses of two grains dissolved in an ounce of water, and repeated every second, third, fourth, or sixth hour, according to the severity of the case.

General bleeding has but little influence over the inflammation of the mucous membrane of the intestines, which forms so constant and formidable a part of the organic affection in fever. If early employed, it may prevent the affection from occurring; but, when it has supervened, large bleedings are

out of the question, and even small and repeated bleedings are not as effectual as leeches. When the purging is considerable, Hydrargyrum cum Cretâ with opiates, or opiate enemas, are useful. If there be constipation, small doses of Castor oil should be given. A few remarks are made upon the treatment of Scarlet Fever; and Dr. Smith concludes his volume by describing the appropriate treatment during convalescence.

The leading principles of treatment maintained by Dr. Tweedie are so similar to those supported by Dr. Smith, that it will be unnecessary for us to follow him closely through his remedial plan. We shall confine ourselves, therefore, to a few passages from Dr. T., some of which are extremely valuable, inasmuch as they caution the practitioner against the excessive employment or misapplication of the most powerful and necessary part of the required treatment. From his own observation, Dr. Tweedie can bear testimony to the practical import of the following doctrine, as applied to fever.

“The aged, infirm, and habitual free livers, in all diseases, bear bleeding ill. But, besides these more familiar classes, there is another, in which phlebotomy must be cautiously and sparingly practised.

“It consists of men, perhaps not above the middle age, whose minds and bodies, either from the circumstances in which they are placed, or from a natural ardor of temperament, are unceasingly taxed to the very utmost of their powers. With this class of persons, and medical men themselves too frequently belong to it, we must deal tenderly, or the mischief will speedily be irretrievable.

“It is also a well-established fact, that in some epidemics, and even at particular seasons, fever is not only more fatal, but does not bear bloodletting so well as at other times. We also know that in complicated fever the local symptoms vary in degree, and therefore require the discriminating hand of experience to apply, with advantage, a modification of this class of remedies.

“The experience of epidemic puerperal fever has shown that, though this severe, and often fatal, disease generally depends on inflammation of the peritoneum, and is most successfully treated by the early and free abstraction of blood, and other antiphlogistic measures, yet in some epidemics, or even in sporadic cases, these measures would be speedily destructive. This is owing not so much to any variation in the symptoms in the disease, as to some unexplained state of the system, at certain periods when puerperal fever is prevalent.” (*Dr. Tweedie*, p. 173.)

If local bleeding is required, Dr. T. considers cupping very superior to leeching. The blood is drawn more ra-

pidly, and the patient feels less fatigued, while the quantity can be regulated according to its effects. Both authors agree that inflammation of the mucous membrane of the bowels, and bronchitis, appear to be little controlled by general bleeding.

“When it was necessary to apply leeches when the powers of the patient were much sunk, I have seen almost fatal sinking from the profuse hemorrhage from the orifices. This hemorrhagic tendency is not peculiar to fever, as it occurs occasionally in other affections; but when it takes place from the abdomen, where pressure cannot be effectually applied, I have known it followed by fatal consequences.

“The practice of applying leeches late in the evening, and covering the belly afterwards with a hot poultice, without carefully watching the patient, should, if possible, be avoided; and when profuse bleeding cannot be restrained by lunar caustic, a fine needle should be passed under the bleeding orifices, and a ligature twisted round in the usual way.” (*Dr. Tweedie*, p. 180.)

*Emetics.* “When the excitement is moderate, when there is no organic inflammation, and when the patient is young and vigorous, I think the shock given to the system by the effort of vomiting, is decidedly useful, by determining powerfully to the surface, and stimulating the organs of secretion.

“If, however, there be considerable vascular action, and more especially any local determination, the operation of an emetic is decidedly injurious. A moderate bleeding, under such circumstances, is the more judicious practice. In feeble subjects, or when the system is much lowered, they should never be employed.” (*Dr. Tweedie*, p. 181.)

*Purgatives*, in some mild cases of fever, without any local determination, was sufficient to subdue the disease.

“From the opportunity I enjoyed of witnessing the efficacy of purgatives in the treatment of fever, while I held the appointment of physician's assistant to Dr. Hamilton, in the Royal Infirmary of Edinburgh, I am convinced that, next to judicious bloodletting, there is no class of remedies so decidedly useful.” (*Dr. Tweedie*, p. 184.)

Indiscriminate purging, Dr. T. conceives to be equally injurious as indiscriminate bleeding. He is certain that much harm has been done by continuing the daily administration of purgatives in tedious cases of fever.

“Another class of cases in which active purging is improper, is subacute bronchitis, which is generally relieved by expectoration. Nothing is more likely to diminish this salutary process than the injudicious administration of purgatives. In such cases, therefore, the more mild aperients, so as to evacuate the bowels thoroughly

without acting on the exhalents, were preferred." (*Dr. Tweedie*, p. 184.)

Mercury is administered in fever with three indications, as a purgative, an alterative, and to subdue inflammation.

"When mercury is employed externally, the best plan is to apply two scruples of mercurial ointment to the axilla, where absorption goes on very rapidly: this mode is more cleanly, and less fatiguing to the patient, than friction.

"The combination of calomel and opium, in inflammation of the chest and abdomen, is a remedy of great power, and I can speak with confidence in its favor." (*Dr. Tweedie*, p. 186.)

This remedy, however, will never supersede bloodletting, when the powers of the patient are able to bear it.

"It is important to avoid, if possible, the full mercurial action, because, when this occurred, I observed that great weakness ensued, which tended much to render the convalescence exceedingly tedious, and often imperfect. I have also occasionally witnessed very troublesome sloughing of the mouth, and even perforation of the cheek, which ultimately proved fatal, from the administration of mercury to children in fever." (*Dr. Tweedie*, p. 187.)

Saline medicines and diaphoretics are considered useless. Dr. T. has great confidence in tartar emetic, in idiopathic as well as symptomatic pulmonary inflammation.

As *Refrigerants*, the mineral acids, especially the oxymuriatic, are preferred. In the early stages they check the thirst and heat of skin, and in the more advanced, particularly when the fever approaches the typhoid character, their antiseptic powers render them decidedly useful.

*Narcotics* must be cautiously employed.

"When there has been much excitement in the brain, an opiate will certainly do harm. Even though the cerebral symptoms have passed off, and the patient complain only of restlessness and want of sleep, its advantages are doubtful. If it be given in such cases, a full dose of solid opium, combined with calomel, is the safest plan of administering it, while the scalp is enveloped in a cold lotion. Sometimes small opiates, repeated at short intervals, answer better than a full dose; for instance, eight or ten drops of the *Liquor Opii sedativus* in Camphor mixture, or in a saline aperient draught, every three, four, or six hours, carefully watching its effects." (*Dr. Tweedie*, p. 189.)

The acetate of morphia is recommended. It is less stimulating, and consequently less injurious should it fail to induce sleep.

*Cold.* The advantage of the free admission of cool air in the treatment of fever, is incalculable. Dr. Tweedie never saw the cold affusion, as recommended by the late

Dr. Currie, of any use. In some instances it was injurious. He speaks highly of the effects of the cold dash.

*Treatment of Typhus Fever.* As a general rule, Dr. T. states that this form of fever neither requires nor bears phlebotomy.

"The rapidity with which the blood flows from the vein, and its appearance when drawn, form a very good criterion of the propriety of its abstraction in typhus fever. If, instead of pouring in a continued full stream, it come in drops, notwithstanding the vein has been well opened; when the blood coagulates slowly, the crassamentum being at the same time soft and easily broken, we may rest assured that the system will not bear bloodletting." (*Dr. Tweedie*, p. 194.)

Purgatives also must be employed with much caution in this form of fever. Daily inspection of the stools in typhus fever is indispensable. When there was any appearance of hemorrhage, the aperient medicines were immediately suspended.

Some judicious remarks are made by Dr. T. respecting the use of wine, and the management of the period of convalescence.

In the ninth and last chapter of his work, he treats briefly of Scarlatina, its varieties, of the epidemic scarlatina of 1828-9, and of its pathology and treatment.

If previous writers upon the subject of fever had pursued the path of investigation which has been so judiciously adhered to by Dr. Smith and Dr. Tweedie, the practical information we should have obtained must have been much more extensive. How many volumes have been written, and how much talent wasted, in the fruitless search after the proximate cause or essence of fever? In medicine, as well as in natural philosophy, it is sufficient for all practical purposes that we should be acquainted with the sensible phenomena, although the causes which produce them may escape our closest scrutiny. *Sufficit si quid fiat intelligamus, etiamsi quomodo quidque fiat ignoremus.* Hippocrates in medicine, and Newton in philosophy, confined themselves to the close observation of facts which were evident to the senses, without pretending to search into the proximate or hidden principles upon which the laws of disease or nature are founded. Dr. Smith and Dr. Tweedie have kept as closely as possible to a practical investigation of the highly important subject upon which they have had so much experience; they have encumbered their works with no visionary speculations, no flights of fancy, and hence their great value to the practical inquirer. Without

instituting any invidious comparisons between the two works, we may observe that Dr. Smith, from the size of his book, has been enabled to enter more fully than Dr. Tweedie has done into the history of the chain of morbid phenomena which constitute febrile diseases, of which he has given a most masterly description. From the arrangement Dr. S. has adopted, frequent repetition of the same facts and doctrines was almost unavoidable. He appears, indeed, to be unconscious of the perspicuity and force of his diction, and often reiterates opinions and arguments which he had before fully impressed upon the attention of his reader. We admire the fluency and animation of his style, but regret it is not more concise. With respect to the treatment recommended, we are of opinion that Dr. S. urges the employment of the lancet with too few precautions and limitations.

Dr. Tweedie's book comes before us with less pretensions than that of Dr. Smith, but it affords ample proofs of accurate observation and practical judgment. It would be unjust to the authors, and to our readers, if we did not very strongly recommend the attentive perusal and study of both these volumes. The numerous cases detailed in them are highly interesting. In conclusion, we must be allowed to express our regret and astonishment that the name of ARMSTRONG is not once mentioned, although some of his doctrines have not been forgotten.

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## COLLECTANEA.

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Floriferis ut apes in saltibus omnia libant,  
Omnia nos, itidem, depascimur aurea dicta.

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### PATHOLOGY.

#### *Fatal Hemorrhage from Rupture of Varicose Veins in the Legs.*

VARICES of the legs are usually considered rather as a source of inconvenience than of positive danger. The two following cases, although similar instances are certainly uncommon, may tend to diminish the confidence both of the surgeon and the patient under such circumstances. They also show, better than any abstract reasoning, the necessity of habitual compression of the extremities affected with a varicose state of the veins.

*Case by M. REIS.* A pavior was attacked, whilst at work, with hemorrhage from the left leg, and in ten minutes he died, notwithstanding compression was immediately applied. Upon examination after death, a varicose ulcer, from ten to twelve lines in diameter, was discovered in the leg, in the middle of which one of the superficial veins had ruptured.

*Case by M. FORESTIER.* A woman, in the seventh month of pregnancy,

was suddenly attacked with violent hemorrhage from the leg. M. P. was sent for, and found the blood spouting forth with extraordinary violence from a varicose vein which had burst. A finger was instantly applied to the wound, and the bleeding was arrested by compression. The quantity of blood lost by this patient was enormous; the chamber was perfectly inundated by it. For many days she remained very weak: she gradually, however, recovered her strength, and her labour took place at the usual period, and terminated favorably. If in this case immediate assistance had not been afforded, death must speedily have ensued from the excessive violence of the bleeding.—*Journ. gen.*

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*Disorganization of the Cuticle in New-born Infants.*—A very important disease of the skin of the fœtus consists in a peculiar condition, causing the epidermis to peel off the soles of the feet, the toes, the palms of the hands, the fingers, and sometimes the whole body, on the slightest touch. I have only once seen the cuticle peeling off in this manner from the whole body and limbs, in a perfect living child; but I have more frequently seen it take place in the palms of the hands and the soles of the feet. In every case it was tolerably clear that the mother had suffered from syphilis during her pregnancy. None of the children lived more than a few days, and, though not born before their time, they were meagre and weakly. The spots from which the cuticle had separated became inflamed, which contributed, together with the general debility of the infants, to the speedy termination of their existence. I am still in the dark as to the nature of this disease.

This condition of the skin on the hands and feet was several times accompanied by an eruption on the same parts, of a variolous character, yet differing from the smallpox in the form and appearance of the pustules. It bore the nearest resemblance to cowpox on the twelfth or thirteenth day of the eruption. I do not know any more of the nature and course of this exanthematous disease, because all the children afflicted with it died soon after their birth, and thus rendered further observation impossible.—*Jörg über die Kinderkrankheiten*, §§ 310, 311.

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*Remarkable Abscess communicating with the Caput Coll.*—A young man, aged nineteen, on the evening of 16th September, 1827, was seized, after eating freely of pears, with pain of the bowels, accompanied with much vomiting and purging. These symptoms were relieved by the usual means, but were immediately followed by fixed pain in the right iliac region, a little below and inwards of the superior spinous process of the ilium. At first nothing unusual was discovered by examination of the part; but after a few days, a deep-seated circumscribed swelling, about the size of an egg, was felt: it was exceedingly painful to the touch, and gave much pain in motion, but the skin covering it was healthy. The functions of the stomach and bowels were now in a natural state, but there was much fever with high delirium. General and topical bleeding, and all the other usual remedies, which were now carefully administered by Dr. BÉGGIE, failed in giving any relief. Fever continued with high delirium; the swelling was still very tender to the touch, and there were frequent attacks of strong rigors. In the beginning of October, the swelling became more diffused and less painful, and an obscure feeling of fluctuation was discovered in it. On the 3d, he was seized with severe diarrhœa, accompanied by a tympanitic state of the abdomen; the local



affection then became less urgent, but the constitutional symptoms continued, and assumed the characters of the advanced stage of low fever, and he died, gradually exhausted, on the 14th.

*Inspection.* Immediately above the caput coli, the omentum had contracted a very firm adhesion to the ascending colon and to the parietes of the abdomen; and in this manner was formed a circumscribed cavity, bounded by this portion of omentum, the posterior surface of the caput coli and the portion of peritoneum lining the parietes at the part. This cavity contained a small quantity of ill-conditioned pus, and three or four bodies, which were found to be the seeds of fruit, covered by an earthy incrustation; it communicated with the caput coli by a small irregular opening, and the mucous membrane around the opening was thickened and highly vascular. The cavity of the abscess was also found to extend behind the peritoneum covering the iliac muscles, and upwards, along the whole extent of the lumbar vertebrae.

There is an obscurity in the pathology of this singular case; and it seems difficult to say whether the abscess had been originally formed and had burst into the caput coli, or whether the perforating ulcer of the caput coli had been the primary disease, and the escape of its contents had given rise to the abscess. The existence of the seeds of fruit, covered by an earthy incrustation, in the cavity of the abscess, would appear to favor the latter supposition.

—ABERCROMBIE on *Diseases of the Stomach*.

*Extensive Disease of the Rectum and Prostate Gland: Stricture of the Arch of the Colon, &c.* A gentleman, aged seventy-two, had been liable for fifteen years, to frequent desire to pass urine, which generally obliged him to get up five or six times in a night, and it was usually accompanied at each time by a desire to go to stool. This at last increased to such a degree, that, for several years before his death, he scarcely ever made water without having his bowels moved. His general health, however, continued good, until about a year before his death, when he began to fall off greatly in flesh and strength. Soon after, his legs became œdematous and his pulse feeble, and he was greatly distressed with flatulence. The frequent desire to pass urine continued, but it was passed without pain. On examination, the prostate was found so much enlarged as to prevent the passage of the finger into the rectum. The abdomen was now tense and tympanitic, and hard deep-seated ulcers were felt in various parts of it, especially in the left side, where they were painful on pressure. The bowels continued quite open or easily regulated, and his motions were of a healthy appearance and rather fluid. He died, gradually exhausted, in July 1827.

*Inspection.* The prostate was very much enlarged, and of a soft cheesy consistence, so that it broke down under slight compression. The coats of the rectum were much thickened, and it adhered extensively to the neighbouring parts. The sigmoid flexure of the colon adhered to the brim of the pelvis. The bladder was much thickened and contracted, but its internal surface was healthy. In the caput coli there was a small ulcer, and in the right side of the arch of the colon there was a thickened and contracted portion, about an inch in extent, which admitted only a small finger. The other parts of the colon, both above and below this contraction, was distended with large hard masses of feculent matter, many of them the size of large eggs; and

it appeared that they had formed the tumors which were felt during the life of the patient.

It is unnecessary to point out the pathological facts which are illustrated by this case. One not unworthy of attention consists in the masses of hard feces in the colon, assuming, in a great degree, the characters of glandular tumors, and some of them being even painful on pressure. It also illustrates, in a striking manner, that singular state of the bowels, in which fluid feces may be discharged regularly and freely, and apparently in abundant quantity, while there is going on for a length of time an immense accumulation of feculent matter, in a very hardened state, extending through the whole of the colon. —*Ibid.*

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*Pathological Researches on Inflammation of the Veins of the Uterus, with additional Observations on Phlegmasia Dolens.* By ROBERT LEE, M.D. Physician Accoucheur to the British Lying-in Hospital. (*Medico-Chir. Transactions*, vol. xv. part ii.)

In a former communication, which I had the honour of presenting to this Society, on the Pathology of Phlegmasia Dolens, I was led, from a series of facts, to infer that inflammation of the iliac and femoral veins gives rise to all the phenomena of that disease in puerperal women. Subsequent dissections have enabled me not only to confirm the accuracy of my former observations, but have led me to discover the important pathological fact that, in phlegmasia dolens, the inflammation commences in the uterine branches of the hypogastric veins, and subsequently extends from them into the iliac and femoral trunks of the affected side.

The object of the present communication is to submit to the consideration of the Society the various facts which appear to establish the truth of these general views of the nature and origin of phlegmasia dolens; and to detail the observations I have made on inflammation of the uterine veins.

**CASE I.** *Phlegmasia Dolens, followed by the usual symptoms of phlebitis and death. The principal abdominal veins, and those of the right inferior extremity, inflamed and obstructed.*

Mrs. Edwards, æt. thirty-five; No. 54, King street. 16th of April, 1829, was delivered of her second child, three weeks ago, after a natural labour; and on the 9th instant was attacked suddenly with pain in the calf of the right leg, and loss of power in the whole right inferior extremity.

On the 13th, a considerable swelling, without discoloration, had taken place from the ham to the foot, and great tenderness was experienced along the inner surface of the thigh to the groin.

The extremity is now universally swollen, painful, and deprived of all power of motion. The temperature along the inner surface of the limb is increased; the integuments are pale and glistening, and do not pit upon pressure. There is no pain in the hypogastrium, but pressure along the course of the crural vessels excites great suffering, and the vein from the groin to the middle of the thigh is indurated, enlarged, and exquisitely sensible. There is also great sensibility in the ham, and along the inner surface of the leg to the ankle, where some branches of the superficial veins are hard and painful on pressure. Pulse eighty; tongue much loaded; thirst; bowels open. There was no rigor or symptom of pyrexia at the invasion of the disease. She

states that the veins of the right extremity were more distended during pregnancy than those of the left.

Twelve years ago, after the birth of her first child, the patient and her relatives report that she experienced an attack similar to the present, in the same limb; and that it remained in a weak condition for several months afterwards, but ultimately recovered its natural size and power.

18th April.—The tension and increased heat along the inner surface of the limb are somewhat diminished, but the pain continues in the course of the vessels.

May 1st.—Affection declining. The femoral vein cannot now be felt, but there is still a sense of tenderness in its course down the thigh. No pitting on pressure. She has suffered, during three or four days, considerable uneasiness between the umbilicus and pubis, as well as in the loins, and has had rigors, with quick pulse, loaded tongue, and thirst. The abdomen is soft, but tender on pressure around the umbilicus.

9th.—The swelling of the limb is nearly gone, as is the tenderness in the course of the femoral vessels. For several days past, she has experienced attacks of acute pain in the umbilical region, loins, and back, which have assumed a regular intermittent form. Every afternoon there has been a violent rigor, of an hour's duration, followed by increased heat and profuse perspiration. In the course of the last and preceding nights, there was slight delirium. The skin is now hot and dry, the pulse 125, the tongue brown and parched, bowels open.

The abdomen is neither tense nor swollen. On pressing around the umbilicus, she complains of a deep-seated feeling of soreness. A strong vibratory motion, corresponding with the pulsations of the heart, is perceived in the epigastrium.

21st.—The febrile attacks gradually declined in severity, and she appeared to recover until yesterday, when she had a long and violent fit of cold shivering. The countenance is now expressive of great anxiety, and the pulse extremely quick and feeble. There remains no visible trace of the affection of the lower extremity.

23d.—Has been vomiting ever since yesterday, at intervals of half an hour. Complains of great pain in the left side, increased upon taking a deep inspiration. The pulsation in the epigastrium diminished, although it is still clearly perceived; pulse 120, and soft.

24th.—Symptoms continue without alleviation. Has had a severe shivering fit of long duration. Skin hot and dry; pulse 140; tongue brown and parched; diarrhoea. The pulsation in the epigastrium has entirely disappeared; the pain in the left side of the thorax is diminished; but the respiration is hurried, and there is frequent cough. Great prostration of strength. Surface of the body has assumed a peculiar sallow tinge. She has been delirious in the night, but is now perfectly conscious when roused.

The conjunctiva of the right eye has suddenly become of a deep red colour, and so much swollen that the eyelids cannot be closed. The cornea is dull; she makes little complaint of pain of the eye, and there is no intolerance of light. The vomiting has ceased.

25th.—Has again had repeated attacks of vomiting. Debility rapidly increasing; respiration hurried; incessant hacking cough; pulse 140, extremely feeble; surface of the body cold and clammy; the tongue and teeth covered

with dark sordes; diarrhœa. The left eye has also become red and swollen, without much increased sensibility.

26th.—Great debility. When undisturbed she is delirious, but is conscious when roused, and complains of pain in the left side of the chest. Pulse above 140; tongue black and dry. Conjunctiva of left eye also affected with swelling and intense redness. The cornea is dull, and shreds of lymph appear to have been effused over the left iris.

28th.—Had so violent a rigor in the afternoon that the bed shook under her. She is now completely insensible. The eyes are red and swollen, and there is a copious secretion of an opaque fluid from their surface and from the eyelids, which cannot be closed. The respiration hurried; pulse 140.

31st.—Has recovered her consciousness, and drank cider and porter with great eagerness. Pulse rapid and feeble. Eyes so much swollen that they seem pushed forward from their orbits. Vision entirely lost; but hearing and the other senses remain.

2d June.—Great debility. A red puffy swelling has suddenly appeared over the right elbow-joint. Tongue dry and black; diarrhœa; frequent, or rather constant wandering, except when spoken to, when she answers questions distinctly, and complains only of pain in the chest, with difficult respiration and cough.

10th.—Little change has taken place in the symptoms, but she has become much weaker. The vision is lost, but the hearing is perfect, and she makes no complaint of pain in any part of the body.

15th June.—Died this morning.

*Morbid appearances on examining the body of Sarah Edwards, on the 16th June. Present, Drs. SIMS and LOCOCK.*

Thorax: In its left cavity were contained upwards of two pints of a thin purulent fluid, and extensive recent adhesions existed between the pleura covering the lower margin of the superior lobe, and the pleura costalis. The surface of the inferior lobe was coated with a thick layer of flocculent coagulated lymph, as was a corresponding part of the pleura costalis. The substance of this lobe was of a dark colour approaching to black, and soft in texture, so as to be readily broken down with the fingers. In its centre about an ounce of thick cream-coloured pus was found deposited in the dark-coloured and softened lung. This was not contained in any cyst or membrane, but infiltrated into the pulmonary tissue.

In the right cavity of the chest, recent adhesions also existed at the inferior part. A considerable portion of the right inferior lobe was entirely changed from the healthy structure, being converted into a dense, solid, dark red-coloured mass. On the anterior surface of this lobe, the pleura was elevated as if by a hard irregular tumor, but, when cut into, no pus escaped from this part, and it presented only the appearance of the surrounding portions of lung with a greater degree of condensation.

Vena cava inferior: Coats of the vessel considerably thickened, and the internal, where visible, of a scarlet colour; its whole cavity occupied by a coagulum, distending it to its utmost extent, and terminating in a loose pointed extremity, about an inch below the entrance of the vena cava hepatica. The coagulum, covered with a membranous-like investiture of a bright red colour, throughout firmly, and in many places inseparably, adherent to the inner lining of the vein; the substance within it varied in consistence and

colour; in some parts it presented the appearance of coagulable lymph, in others it was a pulsatious dull yellow mass, made up apparently of pus and lymph blended together. The exterior of the firmer portions were separated into layers, which gradually disappeared as they approached the centre. The mouths of all the veins emptying themselves into the cava were sealed up, the emulgents excepted; the coagulum, near the entrance of these vessels, hanging loosely within the cava.

**Left common iliac and its branches:** Its interior plugged up with a continuation of the coagulum from the cava, and differing in no respect from it, either as to consistence, colour, or the firmness of its adhesions to the inner tunic of the vein; it was continued beyond the entrance of the internal iliac, (which it completely closed,) and terminated in a pointed extremity about the middle of the external iliac. Neither the remainder of this vessel nor the femoral vein exhibited any morbid changes. The internal iliac was much contracted, and lined with a thick adventitious membrane.

**Right common iliac and its branches:** This vessel was contracted to more than one half its natural size; it was firm to the touch, and of a grayish blue colour; to its internal coat adhered an adventitious membrane of the same colour, containing within it a firm coagulum, made up of thin layers of dense lymph. The internal iliac was rendered quite impervious by dense, dark-coloured, bluish membranes, and at its entrance into the common iliac was converted into a solid cord.

The contracted external iliac contained within it a soft yellowish coagulum, similar to the one in the cava: its coats were three or four times their natural thickness, and lined with dark-coloured membranous layers.

The femoral vein, from Poupart's ligament to the middle of the thigh, was diminished in size, and almost inseparable from the artery. Its tunics were thickened, and its interior coated with a dense membrane surrounding a solid purple coagulum strongly adherent to it. The superficial and deep femoral veins were in a similar condition, and the saphena major and minor differed from the femoral veins only in the size of the coagulum they contained, which was slender, and had formed no adhesions with the layers of lymph lining their cavity.

The cellular membrane and other textures of the limb were in a perfectly healthy condition, and in size and appearance there was externally no visible difference between the two extremities.

The morbid alterations of structure now described can still be distinctly seen in the preparation of the diseased veins, and have been represented with great accuracy in the beautiful drawing made by Mr. Perry from the parts, immediately after their removal from the body.

**CASE II.** *History of a Patient who died of Tubercular Phthisis, subsequent to an attack of Phlegmasia Dolens.*

Mrs. Foster, æt. fifteen, No. 27, Little Windmill street, out patient of the British Lying-in Hospital.

May 8, 1829.—Previous to her confinement, six weeks ago, she had been affected for several months with pain in the chest, difficulty of respiration, cough, with copious expectoration of a matter tinged with blood, profuse perspirations in the night, and had become greatly emaciated.

During the last fourteen days, she has been suffering from attacks of pain in the bowels and diarrhœa.

On the 4th instant, she experienced a sense of soreness in the left groin, which gradually extended along the inner surface of the thigh to the ham, and from thence along the posterior surface of the leg to the foot. She stated that, for two days before the occurrence of pain in the groin, she had felt great uneasiness in the region of the uterus; that this suddenly quitted the hypogastrium, and passed into the groin; and that from thence it extended downward along the inner surface of the thigh and leg. The limb became swollen twenty-four hours after the invasion of the pain.

The whole left inferior extremity is now affected with a hot, painful, colourless swelling, no where pitting on pressure, except over the foot. The thigh is double the size of the other, and any attempt to move the limb produces excruciating pain along the inner surface of the thigh; and the pain excited by pressure along the tract of the femoral vein is so acute that the condition of this vessel cannot be ascertained. Several branches of the saphena major above the knee are distended and hard; pulse 120; respiration quick and laborious; tongue peculiarly red and glossy; diarrhœa continues.

10th.—Pulmonary affection aggravated. The limb continues extremely painful, and is still more swollen. The groin is so tender that she cannot endure the slightest pressure over it. The same is the case with the inner surface of the thigh. The branches of the saphena vein are still hard and painful.

11th.—The femoral vein, under Poupart's ligament, can now be felt indurated and enlarged, and it is exquisitely painful when pressed; as is the inner surface of the thigh, the ham, and the calf of the leg. There is comparatively little tenderness along the outer surface of the limb; pulse 120; skin hot.

17th.—Diarrhœa, emaciation, colliquative sweats, and difficulty of respiration increasing. The left inferior extremity is still much swollen, but there is less pain at the groin, and in the course of the femoral vessels. The foot and ankle pit on pressure.

26th.—Calf of the leg still swollen and painful.

June 19.—The pulmonary affection aggravated, and she is now reduced to a state of extreme debility. The limb is still considerably swollen, and is universally œdematous.

24th.—Died this morning.

*Dissection.* Present, Dr. SIMS and Mr. PROUT.

Thorax: Extensive adhesions between the pleuræ on both sides. Scarcely a portion of lung could be observed which did not contain tubercles, in various stages of their growth. The right and left superior lobes contained several large tuberculous excavations.

The vena cava and right common and external iliac veins were in a sound state.

The left common external and internal iliac veins were all impervious, and had undergone various alterations of structure.

The common iliac, at its termination, was reduced to a slender tube, about a line in diameter, which was lined with a bluish slate-coloured adventitious membrane. The remainder of the common and the external iliac veins were coated also with a dark-coloured membrane, and their centre filled with a brownish ochrey-coloured tenacious substance, rather more consistent than the crassamentum of the blood.

The left hypogastric or internal iliac vein was in the same condition, but in

some places reduced to a cord-like substance, and its cavity throughout completely obliterated. The branches of this vein taking their origin in the uterus, and usually termed the uterine plexus, were found completely plugged up with firm reddish coagula of lymph. From the commencement of the branches of this plexus of the hypogastric vein to the termination of this vein in the iliac, the whole had become thickened, contracted, and plugged up with coagula and adventitious membranes of a dark blue colour.

The same changes had taken place in the uterine plexus and trunk of the right hypogastric vein, from the uterus to its unusual termination in the left common iliac vein.

The coats of the left femoral vein were thickened, and closely adherent to the artery and surrounding cellular substance; its whole interior lined with an adventitious membrane, and distended with a reddish-coloured coagulum. The same morbid changes presented themselves in the deep and superficial branches, as far as they were examined down the thigh.

\*.\* Dr. LEE's paper, from which we have taken these cases, must be considered one of the most valuable pathological contributions of the day. In our opinion, Dr. L. has clearly shown the true pathology of phlegmasia dolens. We confess we were before doubtful of the connexion of this disease with inflammation of the veins; but Dr. Lee has entirely removed our scepticism upon this point.—EDITOR.

#### PRACTICAL MEDICINE.

*Arsenic in a Case of Leprous Affection and Periodical Headach.* In the third volume of the Philadelphia Medical Museum, a highly interesting case of leprous affection, combined with periodical headach, is related by Dr. J. R. COXE, in which the value of arsenic was very conspicuous, and in which any excess over fifty drops of Fowler's solution was followed by unpleasant consequences. The case also illustrates the safety of the article, as the patient commenced with twenty drops three times a day, gradually increasing the dose, till, at the end of six weeks, she took fifty drops three times a day, and that for several weeks! For a short time she took sixty drops three times a day, but this disagreed, and she returned to fifty. She took altogether, in the course of somewhat less than four years, between a quart and three pints! The remedy had a beneficial effect on both complaints, which returned, however, from time to time when the medicine was laid aside, but always with diminished intensity.

*Utility of Ipecacuanha in Hæmatemesis.\** (Dr. CONDIE on *Hæmatemesis*. *North American Med. and Surg. Journal*.)

In the summer of 1827, we were requested to see a young woman who was vomiting blood. The patient was about eighteen years of age; she had suffered for a long time from attacks of intermittent fever, which had been finally suspended by large doses of the bark. She did not, however, recover her health, but remained in a state of langour, without appetite; her bowels

\* To this practice the attention of the profession was first directed by Dr. SHERIDAN. In a paper he published in the fourth volume of the *Transactions of the Dublin College of Physicians*, he reports five cases of hæmatemesis, in which ipecacuanha was employed with the best effects.

constipated; the skin of a yellow hue, dry and harsh; her tongue foul. Occasionally she felt chilly, and was immediately afterwards flushed with heat. She complained of pain in the head, and disinclination to motion. Menstruation was suspended; some tumefaction was experienced in the right hypochondrium, with tenderness of the epigastrium, and frequently violent attacks of gastralgia. When we saw her, she was discharging vast quantities of dark-coloured blood, partly fluid and partly coagulated; her face was pale, pulse small and feeble, tongue pointed and red at the edges. Twenty grains of ipecacuanha were directed in one dose. This was taken late in the afternoon, and produced considerable vomiting, first of pure blood, then bloody mucus, and finally mucus alone. She now fell asleep, and awoke the next morning without nausea, but much exhausted. Her bowels were directed to be opened by an enema, and toastwater alone for food and drink. There was no return of the hemorrhage. In a few days, remedies adapted to the morbid condition of the stomach and liver were entered upon; and the patient finally recovered, and has remained perfectly well to the present day.

In the spring of the same year, we had under our care, with vomiting of blood, a female, forty-six years of age, of a robust habit and dark complexion. She had suffered for some time previous from irregularities of the menstrual flux, with a feeling of weight and uneasiness at the præcordia; occasionally dull pains in the epigastrium; frequent chills, followed by a burning heat of the skin; lowness of spirits, and deficient appetite. For the few days before our visit, she had frequently thrown up a quantity of blood by vomiting, and was then discharging it profusely. The pulse was contracted; skin dry and harsh, its temperature being somewhat increased; tongue furred in the centre, very red at the margin. Directed a scruple of ipecacuanha to be divided into four powders, one of which to be administered every hour. After the first had been taken, the vomiting was suspended: the remedy produced neither nausea nor vomiting. The ensuing day the patient was confined to toastwater; twelve ounces of blood were taken from the arm, and a purgative of calomel administered. The hemorrhage did not return, and an appropriate treatment very soon removed all symptoms of gastric disease. The patient has since enjoyed uninterrupted health.

A female, forty-three years of age, during the summer and autumn of 1823, had suffered from frequent attacks of fever and ague. Emetics, purgatives, arsenic, and quinine, were the remedies employed for its cure. The regular paroxysms of the fever had by these means been suspended; but the patient was left in a state of great muscular weakness, disinclined to motion, without appetite, and depressed in spirits. Her bowels were constipated; she was subject to frequent rigors, succeeded by flushes of heat, and a burning in the palms of the hands; and there was considerable tumefaction of the abdomen, tenderness, with dull constant pain of the epigastrium, and great thirst. About the 10th of January last, she was attacked with hæmatemesis: the discharge of blood was profuse, and when I saw her she presented all the appearances consequent upon excessive hemorrhage. A scruple of ipecacuanha in four powders, one to be taken every hour, was directed. Soon after the powders were commenced with, the hemorrhage ceased; but great thirst and nausea still continued. The next day the vomiting of blood returned, but not to so great an amount. Twenty grains of ipecacuanha were given at once, and a considerable quantity of mucus coloured with blood was brought up, when the hemorrhage and vomiting ceased. About two weeks subsequently, the dis-



charge of blood returned, but was immediately suspended by small doses of the ipecacuanha; three grains every hour. Notwithstanding every remedy subsequently employed in this case, the disease of the stomach and liver was of such a nature that the recovery of the patient has been extremely slow. As the gastric symptoms by degrees abated, an ascites was gradually developed, from which she is now rapidly recovering; and I have every prospect of being shortly able to restore her to perfect health.

Equally efficacious with the ipecacuanha, in the suspension of stomachic hemorrhage, we have found to be the administration of minute doses of calomel; say from one quarter to half a grain every hour. The remedy in these doses we have repeatedly employed, and never without the desired effect. Whether there is any difference in the set of cases to which one or other of the foregoing plans of treatment is particularly adapted, we have ourselves not been able to determine. The small doses of calomel will, of course, be preferred, whenever it may be deemed improper or inexpedient to risk the production of vomiting; an effect which will frequently result from even inconsiderable doses of the ipecacuanha; but in all cases in which the hemorrhage is profuse, and it is apprehended that the patient may speedily sink under it, we would prefer the latter, in consequence of the greater promptness with which it acts in suspending the effusion of blood.

After the violence of the hemorrhage is abated, we have experienced beneficial effects, in cases connected with hepatic disease, from the application of a blister in the neighbourhood of the liver.

In hæmatemesis occurring in females between eighteen and thirty years of age, preceded by great languor and oppression about the chest and præcordia, a sense of fulness in the latter, cough, dyspepsia, and sometimes pain in the breast, loss of appetite, headache, vertigo and disturbed sleep, a dulness of the eyes, and a countenance expressive of great distress, a feeble pulse, and constipated bowels, Dr. HAMILTON has found, he declares, that the proper exhibition of purgatives, so as to produce a free evacuation from the bowels, affords an effectual means of removing the hemorrhage. "Suspended menstruation," remarks Dr. H. "is not a necessary concomitant of this species of hemorrhage." Calomel was the purgative generally employed by this gentleman in these cases.

We have also treated stomachic hemorrhage by the administration of scruple doses of calomel; and in some instances with the most prompt and decided good effects. In general, however, we prefer the employment of the calomel in the small doses already indicated. From any other of the list of purgatives we should anticipate harm rather than advantage in hæmatemesis.

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*Specific for the Hooping-cough.* In Rust's *Mag. f. die gesamt. Heilkunde*, (No. ii. 1828,) it is stated that Dr. MEYER, of Minden, has in a few days been enabled to remove all the symptoms of pertussis, by the external application of morphia. He directs a small blister to be applied over the præcordia; the detached cuticle being removed, the exposed surface is to be sprinkled over with half a grain of morphia, rubbed up with starch. The morphia is to be repeated every evening. The only internal remedy he employed was an emetic. If necessary, the blister may be reapplied every third day. In five cases, the disease was so far diminished in eight days, that no further treatment was considered necessary.

## *Nitrate of Silver in Diseases of the Eye, &c.* 275

*Chlorine in Hydrophobia.* M. JULIA FONTENELLE, in one of his clinical lectures, after mentioning the experience of Drs. SCHOENBERG and SEMMOLA in favor of chlorine applied to the wound, and taken by the mouth, diluted in water, as a cure for hydrophobia, thinks that the chloride of soda might be advantageously substituted internally for the chlorine. M. COSTER strongly recommends the application of chloride of lime to the wound, as capable of completely neutralizing the poison.

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### SURGERY.

*Solution of Nitrate of Silver in Diseases of the Eye.* The *Journal für Chirurg. und Augenheilkunde*, vol. xii. (No. i. 1828,) contains an abstract of Professor GRAEFE's clinical report of the Institute for Surgery and Diseases of the Eye of the University of Berlin, for the year 1827. In this, among other interesting particulars, it is mentioned that the efficacy of a solution of the nitrate of silver, dropped into the eye, or applied by means of a hair pencil, as a remedy in obstinate cases of *Blennorrhagia Oculi*, the employment of which was noticed in a preceding report, has been confirmed by the experience of the present year.

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*Gonorrhœa cured by Injections of Balsam Copaiba.* Dr. ELLJAH COONS, of Tusculum, Alabama, records, in the *Transylvania Journal*, the account of a case of *Gonorrhœa*, (which ought rather to be called gleet or chronic gonorrhœa,) cured, after other remedies had failed, by the use of balsam copaiba used as an injection four or five times a day. Diet spare; drinks mucilaginous; Seidlitz powders used to keep his bowels open. In a period of between two and three weeks he was quite well. Dr. C. had introduced a bougie into the urethra, but did not detect any stricture.

He has since had two cases similar to the first, but of shorter duration, in which the same happy effect followed the above treatment.

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### MIDWIFERY.

*Dropsy of the Allantoid.* I have few anomalies to mention relating to the allantoid, that pouch between the amnion and the chorion; and it is probable that this organ is subject to few irregularities, because, in the human species, it is in a state of activity only during the first three or four months of pregnancy, and afterwards sinks into repose. Nevertheless, I have observed that, during the latter months of gestation, a large quantity of fluid is sometimes collected in it, without injury, however, to the fœtus or the mother, as the fluid is discharged every fortnight or month; thus relieving both the woman and the child. Were it not for this, as the dropsy of the allantoid is sometimes very considerable, the woman's health would be endangered by an over-enlargement of the uterus.—JÖRG *über die Kinderkrankheiten*, § 305.

\*.\* The evacuation of this fluid sometimes gives rise to the alarming suspicion that the membranes have been prematurely ruptured, and that abortion is about to take place; as in the case of Mrs. Finlayson, related by Dr. MERRIMAN, in his *Synopsis of Difficult Parturition*, fourth edition, p. 223.—

EDITOR.

## MATERIA MEDICA.

*Sedative Action of Asparagus upon the Circulation.* Digitalis and prussic acid possess the property of weakening the action of the heart, but the employment of these medicines is frequently prevented by the gastric irritation they produce. M. BROUSSAIS proposes, as a substitute for these remedies, asparagus, which is perfectly inoffensive to the stomach, and acts as a sedative upon the heart. If a patient, suffering from hypertrophy and excessive action of the heart, eat asparagus, M. Broussais assures us he will find relief; and if the remedy is discontinued, the habitual symptoms will return. Syrup of the green ends of asparagus, like the plant itself, has the power of diminishing the action of the heart, without annoying the stomach. A man, labouring under hypertrophy of the heart, perceived a very decided alleviation of his sufferings while he was in the habit of eating asparagus, and he consequently prepared a syrup of the plant for use when it was out of season. A physician, whom M. Broussais does not name, but to whom he is indebted for this discovery, collected many cases in support of this statement; and the Professor of Val-de-Grâce declares that it is confirmed by the result of his own experience.—*Ann. de la Méd. Phys.*

\*.\* There is a popular, and perhaps even a professional, opinion that asparagus acts as a diuretic. When eaten in any quantity, this plant certainly imbues the urine with a peculiar odour; but, as far as we have observed, CULLEN correctly remarks that "neither the quantity of the urine is increased, nor its quality anywise changed." BOERHAAVE and VAN SWIETEN thought that, upon some occasions, they had observed the eating of asparagus to hasten fits of the gout. We doubt the correctness of this supposition.—

EDITOR.

## NATURAL HISTORY.

*Method of killing Insects for Preservation in Cabinets.* This method consists in enclosing the insect in a paper or thin wooden box, and exposing it for one or two seconds to heat near the fire. The heat immediately kills insects the most tenacious of life. The process does not alter the most delicate colours; but if the heat be continued too long, the wings and other parts of the body begin to wrinkle.—*Bull. Univ.*

## MISCELLANEOUS.

*Poisoning by Strychnia.* M. GUIBOURT stated lately to the Academy of Medicine, that, having observed a dog in violent convulsions, in consequence of having eaten one of the compound balls containing strychnia, or vomica nut, which the police use to destroy wandering animals, he forcibly made it swallow powdered nutgalls, when the muscular convulsions immediately ceased; ipecacuanha was then given to the animal, but the latter could not vomit. The next day, milk was given to it and manna; after which, the dog recovered. M. CAVENTOU said, that the infusion of galls was a very effectual opponent to vomiting, and that he had observed it destroy the power of emetic tartar. M. ORFILA has already advised the administration of this infusion in cases of poisoning by opium and salts of morphia.—*Ibid.*

## INTELLIGENCE.

## COLLEGE OF PHYSICIANS.

THE evening meetings held at the College of Physicians commenced on Monday, February 8th, under the most auspicious circumstances. Among the company present were the Duke of Wellington, Lord Lyndhurst, Lord Tenterden, Lord Westmoreland, Lord Stanhope, several bishops, judges, and other distinguished persons. The presence of so many noblemen and members of the government gave great éclat to the conversation; and their honouring the College on this occasion is calculated to raise our profession in public estimation, by showing how highly it is appreciated by men of the highest rank, and holding the most prominent stations in the country. When we reflect how industriously it has been attempted by some to lower us in the public eye, we feel doubly called upon to express our sense of the obligation under which we lie to Sir Henry Hallford, to whose connexion with the aristocracy, and to whose zeal in promoting the honour and dignity of the profession over which he so ably presides, the College is indebted for the presence of these distinguished visitors.

The learned President having taken the chair, with the Lord Chancellor on his right and the First Lord of the Treasury on his left, congratulated the meeting on the advantages which they had gained from the establishment of statistical reports on the nature of disease as it presents itself in foreign countries; and he spoke in high terms of the facilities which had been afforded in effecting this purpose by various members of his Majesty's government.

After these preliminary remarks, Sir Henry proceeded to lay before the meeting an interesting paper, which turned chiefly on the prophetic power attributed by so many of the philosophers and poets of antiquity to the last moments of life; a subject calculated to arrest attention; while additional interest was excited by the elegant language in which the essay was written, by the numerous classical illustrations in which it abounded, and by the emphatic and excellent manner in which it was read by the learned and accomplished author.

SIR HENRY HALFORD on the *Prophetic Power said to occur before Death*  
in the *Kauwos*, or *Brain Fever*.

Sir Henry began by observing, that he regarded the description given by Aretæus of the *kauwos*, or burning fever of Hippocrates, (the brain fever of English authors,) as one of the most interesting specimens of medical literature which had come down to us from antiquity; remarkable alike for the beauty of the language (Ionic Greek,) and the fidelity of the details. It was not to the early stage, similar in its phenomena to other inflammatory diseases, but to its termination, that the author was anxious to direct attention; a termination ushered in by syncope, followed by cold sweats, and "a loosening of all the bonds by which the human frame is held together."

Aretæus represents the patient as the first to discover his approaching end, and announcing it to his attendants; as seeming to hold converse with those gone before him, and acquiring a prophetic power in the last moments of existence; while he attempts to account for this by supposing that the soul,

whilst "shifting off this mortal coil," becomes purer and more spiritual, as if its new existence had already commenced.

This account of the description of Aretæus was followed by the history of a case which had fallen under the care of the learned President. A young gentleman, who had been using mercury, caught cold while under its influence, and became affected with fever. On the seventh day, when Sir Henry was first called in, he was in a state of the highest excitement; threatening those around him, and not to be approached without increasing his irritation to fury. He was put under restraint, and tartarized antimony administered at intervals, in doses of a grain each time. On the eleventh day from the commencement of the attack, he became quite calm, and to those about him he seemed much better. It was observed that he had repeatedly said he should die, and had talked with the utmost composure of his affairs, giving directions for their arrangement. He sent messages to his absent friends, and spoke of a sister recently dead, as one whom he was about immediately to follow. In answer to his interrogations, Sir Henry found that he had not slept anterior to this quietude, and that his pulse was quicker than ever. He then became satisfied that the improvement was but in appearance, that it was "a lightning before death," and that the hours of his patient were numbered. He died that night.

The author then alluded to the case which he had related last year, in which a gentleman, labouring under insanity, was put to Shakspeare's test of "re-wording" his meaning. In this case, also, some restoration of the mind took place before death; but, as the case was a chronic one, the phenomena were different: different as delirium from insanity. The mention of this distinction led the author to allude to the eloquent pleading of Lord Erskine, in defence of Hatfield, who was tried for shooting at the King. "In some cases," said he, "perhaps in several, the human mind is stormed in its citadel, and laid prostrate under the stroke of frenzy. These unhappy sufferers, however, are not considered by physicians as maniacs, but to be in a state of delirium from fever. There, indeed, all the ideas are overwhelmed, for reason is not merely disturbed, but wholly driven from her seat. In others, reason is not driven from her seat, but distraction sits down upon it along with her, holds her trembling upon it, and frightens her from her propriety."

Returning to Aretæus, and the prophetic power attributed by him to patients under this form of fever, the learned President observed that it did not appear to him necessary to attribute the phenomena to any supernatural influence. We were accustomed to see the mind frequently "clear up" in the last hours of life, especially when this is cut short by diseases which have previously disturbed the intellectual faculties. The mind becoming capable of exercising the most correct judgment when no longer biassed by the passions, and the experience of the past giving wisdom to the inferences as to the future; such being a period, according to the lines of Milton,

"When old experience does attain  
To something of prophetic strain."

The author next entered into a curious and erudite discussion, in which he displayed great ingenuity and research. The object was to prove, by numerous illustrations, the general prevalence in ancient times of a belief that some prophetic power attended the last hours of existence. He began by referring to holy writ, quoting the passage from the Pentateuch, where it is said that

"when Jacob had made an end of commanding his sons, he drew up his feet into the bed, and yielded up the ghost." The former part of this passage, Sir Henry thought, might be more faithfully rendered, "when Jacob had finished imparting his solemn injunctions to his sons;" injunctions which were mixed up with much prophetic matter. And, although the learned President, believing the narrative of Moses to have been guided by the light of inspiration, and therefore not to be humiliated by being compared even with the sublime description of disease to which he alluded, still, he observed, it was remarkable that the Deity should think fit to choose the dying hour of the patriarch in which to enlighten his mind as to his gracious purposes for the future.

The fame of Jacob's prophecy, as well as of those of Isaiah, extended far beyond the limits of the country in which they were made; and the learned President deemed it probable that they had spread over the whole of the Roman empire by the authority of the Sibylline leaves. The general belief which attributed the gift of prophecy to the hour of death is alluded to by many, both of the Greek and Roman authors; and among others, Cicero, no less distinguished as an orator than as a philosopher, in his first book "*De Divinatione*," mentions that the death of Alexander the Great had been predicted by an Indian about to die on the pile. In the sixteenth book of the *Iliad*, Patroclus foretells the death of Hector; while Hector, in his last moments, prophesies the fall of Achilles by the hand of Paris.

The same idea of prophetic power is seen in Virgil, who makes Orodes (tenth book of *Æneid*) predict the death of Mezentius, by whom he had just been mortally wounded.

"Non me, quicumque es, inulto,  
Victor, nec longum lætabere: te quoque fata  
Prospectant paria, atque eadem mox arva tenebis."

So also Shakspeare, when Hotspur falls in combat with Harry Monmouth,

"Oh! I could prophesy,  
But that the earthy and cold hand of death  
Lies on my tongue."

In Richard the Second, too, we find John of Gaunt, when dying, exclaim,

"Methinks I am a prophet new inspired."

The author concluded nearly in these words: "I have extended this speculative part of my paper to too great a length: not that I dread the reproach of those among you who delight to mix the elegancies of literature with the severer studies of your profession; nor do I fear the disapprobation of others who are intent only on acquiring a knowledge of physic; they will surely thank me for having laid before them so faithful, so beautiful an historian of disease as Aretæus."

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REGULATIONS WITH REGARD TO PAPERS.

*Resolutions of the Committee appointed to receive and consider the Papers presented to the College.*

1. All papers proposed to be read at the evening meetings of the College, should be sent to the registrar at the College of Physicians, who will acknowledge the receipt of them by a notice to their respective authors.

2. All papers thus received will be laid before the president and committee, who will arrange the order in which they shall be read.

3. All papers will be read to the meeting by the registrar, or his deputy, in the presence of the president or pro-president.

4. Notice will be given to each author of the evening on which his paper will be read.

5. At the end of each year, a selection of such papers as may be deemed useful for publication, whether read or not at the College, will be made, and, with the consent of the authors, printed in the Transactions.

6. Such papers as either, from want of time, may not be read at the College, or not deemed desirable for publication, will be returned to the authors at their request.

7. The reading of papers will commence at a quarter-past nine o'clock precisely, and will not be protracted beyond ten o'clock.

8. No paper which has been previously read before any other Society will be admissible.—*Med. Gazette.*

#### ROYAL INSTITUTION.

*Natural History of the Oak.* Mr. GILBERT BURNETT recently delivered a very interesting lecture upon the natural history of the oak. Mr. Burnett observed, that much confusion had existed as to the botanical names and the number of species of our native oaks. LINNÆUS considered them all varieties of one species, which he named *Quercus robur*. Later botanists distinguished several species. He was inclined to think there were three, and only three, indigenous oak; viz. the stalk-fruited, the sessile-fruited, and the downy; and that the others are mere varieties, or probably male plants, formed by the mutual impregnation of the three above-named species. SMITH calls the first *Q. robur*; WILLDENOW applies the specific name, *robur*, to the second; while Mr. B. argued that the characters ascribed by the ancients to their *robur* agreed the most closely with the third. With regard to the acorn, formerly so much used as an article of food, Mr. Burnett stated that they were rendered much more palatable, as well as more nutritious, by allowing them to germinate, and then suddenly checking their growth by heat, as in malting. A similar plan might be followed with the horsechestnut, which might thus be rendered fit for service. The mode by which this process acts is by the formation of a considerable portion of sugar.

Some acorn bread and biscuits were exhibited, of which we anxiously sought to procure a taste; but so keen was the appetite of the naturalists present, or so great their curiosity to determine whether the ordinary food of their forefathers could be again brought into use, that we retired unsuccessful, and without a single crumb. Mr. Burnett's discourse was much and deservedly applauded.

#### COLLEGE OF SURGEONS.

*Hunterian Oration.* The last Hunterian Oration was delivered by Mr. GUTHRIE, to a very numerous audience. We have not room to enter into the subject of it, but we must observe, that it was correctly conceived and eloquently delivered. They who most delight in censure have admitted that Mr. Guthrie showed his superiority as a public speaker over most of those who have appeared in the character of annual orators at the College of Surgeons.

*Exposure of M. Chabert, the soi-disant Poison Swallower and "Fire King."*

We have hitherto refrained from making any observations respecting the feats of this personage. Like many others, he has dealt largely in promises, and but scantily in performance. His exhibition of remaining in an oven heated to a very high temperature, while meat was roasted, was not calculated to attract much curiosity. Neither was there any thing marvellous in his swallowing boiling oil: such feats as these have often been performed before, by some from their love of science, by others as an exhibition for money. But when M. Chabert asserted that he could swallow poisons with perfect safety, in consequence of possessing a certain antidote to their destructive effects, the curiosity of the public, and the scientific and medical part of it especially, was instantly roused. We had before some reasons to believe he was a rank impostor, but now he is proved to be so beyond the possibility of doubt. Mr. WAKLEY lately put his pretensions to the test, by requesting him to perform his promise of swallowing prussic acid. M. Chabert positively refused, but offered to give it to some dogs! Upon this his audience became unruly, and indignant at having been duped out of their money; and the impostor made his escape as quickly as possible. It is not for us to describe the confusion that followed. We wish only to record the fact, that an antidote for prussic acid, arsenic, &c. is yet to be obtained, for M. Chabert is in possession of no such valuable agent.

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**MEDICO-BOTANICAL SOCIETY. (*Circular.*)**

The Council of the Medico-Botanical Society of London considers it to be its duty to inform those who in this and in other countries belong to the Society, or may wish to communicate with it,

That all communications intended for the Society are to be addressed to the president, Earl STANHOPE, No. 12, Albemarle street, London; or to one of the secretaries, Dr. SIMMOND, No. 24, Dover street, Piccadilly, and HUMPHREY GIBBS, Esq. No. 47, Half-moon street, Piccadilly, London.

That all payments to the Society are to be made to the treasurer, THOMAS GIBBS, Esq. No. 47, Half-moon street, Piccadilly, London.

And that Mr. JOHN FROST, who was formerly the Director of the Society, has, by the Council and by the Society, been suspended from the functions of that office; and that the office of director now no longer exists.

By order of the Council,

STANHOPE, *President.*

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**MEDICAL SCHOOL, ALDERSGATE STREET.**

The third anniversary festival of this Institution took place on Friday, the 19th instant, at the London Coffeehouse, Ludgate hill; Mr. TYRRELL in the chair. About one hundred gentlemen (chiefly those who have been educated at the School) sat down to an excellent dinner, and the utmost hilarity prevailed throughout the evening. Judging from the number present, and the enthusiasm with which the healths of the different teachers were drank, we are inclined to augur favorably of the establishment. According to the statement of the chairman, the past season has been more prosperous than either of the preceding.

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**LITERARY NOTICE.**

Dr. CALVERT HOLLAND has in the press a work entitled "The Physiology of the Fœtus, the Liver, and the Spleen."



**THE MEDICAL PROVIDENT INSTITUTION OF SCOTLAND,**  
*For the granting of Benefits during Professional Incapacity; and, in old age, Annuities to Widows, or others.*

Although societies have existed for a considerable period both in Scotland and England, in which men of every profession could make provision for old age, and for their families or other dependents, after death—it has excited the surprise of many, that, until the formation of the Medical Provident Institution of Scotland, there was no fund established by any other society, with the exception of the funds of Friendly Societies, among the labouring classes, by contributing to which, provision could be made for a day of sickness.

The objects of this institution are generally—To protect the members throughout their whole lives, and to make provision for their widows, children, or other dependents, after their death. The casualties to which professional men are exposed, are—First, occasional or temporary inability to continue the personal exertions upon which their incomes depend, by reason of sickness or accident; and, second, The more durable or permanent incapacity arising from the infirmities of old age.

The scheme embraces the following benefits:—I. Health Assurance—II. Deferred Annuities, and III. Contingent Annuities.

I. *Health Assurance*.—Under this head, provision is made for professional incapacity, whether arising from sickness or accident, and this is combined with a permanent annuity in old age.

II. *Deferred Annuities*—or annuities in old age, form the second table in the scheme. These annuities are combined with the health assurance in the former table; but they may also be assured separately, and may be entered upon at 50, 55, or 60: there is also a payment equal to a whole year's annuity, within three months after death.

III. *Contingent Annuities*—or annuities to widows or other survivors, form the third table. These annuities, contingent on the wife surviving the husband, are too well known to require any description here. They may be granted to others than the wives of members, such as brothers, sisters, or other nominees.

The Medical Provident Institution is a *mutual* assurance scheme, and the whole funds belong to the assured; and, should the rates of contribution be found to be higher than they might have been, the surplus will, in one form or other, be made available to the members, and not carried off by any body of proprietors.

Forms of the proposals, and certificates, and every necessary information, may be obtained on application to Mr. D. CANNAN, Secretary, 41, Northumberland street, Edinburgh.

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Dr. JOHN BROWN, *the Author of the Theory of Medicine*. It is well known that this admirable scholar, and most ingenious medical theorist, died at a comparatively early age, leaving a wife and young family entirely unprovided for. Had he lived longer, he would have enjoyed the gratification of knowing that his doctrines were adopted on the continent of Europe, particularly in Germany and Italy. Indeed they form the basis of the more recent theory of Rasori and Tommasini, which is now very generally adopted in the latter country. Of Dr. Brown's family, a son and daughter are still alive; the son held the appointment of purser in the navy, but has now to provide for a

family with a pittance of half-pay. The daughter has supported herself respectably through life, as a private governess; but age and infirmity have overtaken her, and she is now entirely unprovided for. She is desirous of publishing, by subscription, a work of imagination; and, as the inquiries we have made respecting her have afforded us the utmost satisfaction, we make this appeal to the profession in her behalf. The names of Subscribers will be received at our Publisher's, or at any Medical Bookseller's. We are happy to add, that the most eminent medical men in the metropolis have, with a liberal feeling, subscribed to her undertaking.

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*Sale of the Remainder of Mr. BROOKES's Museum.* The remainder of this invaluable Anatomical and Zootomical Museum is to be sold by auction by Messrs. WHEATLEY and ADLARD. The first day of the sale will be Monday, March 1st, at half-past six in the evening, at the Theatre of Anatomy, Great Marlborough street. Such an opportunity of purchasing rare examples of natural history, and natural and morbid anatomy, may never again occur, and will doubtless attract a numerous and scientific company.

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#### OBITUARY.

We have to deplore the recent death of Dr. GOOCH, who was not less distinguished by his extensive acquirements as a general scholar, than his practical ability as a physician. The talent Dr. Gooch possessed as a writer was not so generally appreciated as it deserved to be, as his best and most finished compositions were published, anonymously of course, in the leading literary periodicals, and were known only to a few as the productions of his pen. Dr. Gooch's recent work, "On some of the most important Diseases of Females," of which we gave a copious analysis, is one of the best specimens of medical literature of the present day.

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#### MONTHLY LIST OF MEDICAL BOOKS.

*[Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]*

A Popular Summary of Vaccination, with Reference to its Efficacy, and probable Causes of Failure; as suggested by extensive Practical Experience. By JOHN MARSHALL, Esq. Member of the Royal College of Surgeons, and District Vaccinator to the National Vaccine Establishment.—8vo. pp. 95. Underwood, London, 1830.

Introductory Lectures to a Course of Military Surgery, delivered in the University of Edinburgh. By GEORGE BALLINGALL, M.D. F.R.S.E. Regius Professor of Military Surgery, &c.—8vo. pp. 246. Black, Edinburgh; Longman, London, 1830.

Illustrations of some of the principal Diseases of the Ovaria, their Symptoms and Treatment; to which are prefixed, Observations on the Structure and Functions of those Parts in the Human Being and in Animals. By EDWARD J. SEYMOUR, M.D. Fellow of the Royal College of Physicians of London, and one of the Physicians to St. George's Hospital. With fourteen Lithographic Engravings.—8vo. pp. 126. Longman, 1830.

We shall give an analysis of this very important contribution to Pathology in our next Number.

Observations on the Functional Disorders of the Kidneys, which give rise to the Formation of Urinary Calculi; with Remarks on their Frequency in the County of Norfolk. By WM. ENGLAND, M.D. &c.—8vo. pp. 108. London: Underwood, 1830.

Lectures on Practical and Medical Surgery: comprising Observations and Reflections on Surgical Education; on the Investigation of Disease, and on the ordinary Duties of the Surgeon; forming Part of an extended Course on the Principles and Practice of Surgery, delivered in 1828 and 1829. Illustrated by Engravings. By THOMAS ALCOCK, Member of the Royal College of Surgeons in London, &c.—8vo. pp. 302. Burgess and Hill, London, 1830.

A Practical Essay on Stricture of the Rectum; illustrated by Cases, showing the Connexion of that Disease with Prolapsus of the Rectum, Irritation of the Lungs, Affections of the Urinary Organs, and of the Uterus, Fistula, &c. To which are now added, some Practical Observations on Piles and the Hæmorrhoidal Excrecence. By FREDERICK SALMON, senior Surgeon to the General Dispensary, Aldersgate street. Third Edition, very materially enlarged.—8vo. pp. 272. Whittaker, London, 1829.

### METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

January	Rain gauge.	Moon	Thermom.			Barometer.		De Lue's Hygrom.		Winds.		Atmospheric Variations.		
			9 a.m.	max.	min.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	2 p.m.	10 p.m.
20			31	35	30	28.65	28.70	73	73	E	WNW	Snow	Rain	Snow
21			32	37	31	29.21	29.33	75	73	SW	NNW	Foggy	Fine	Cloudy
22			34	35	31	.46	.56	72	71	SE	SE	Snow	Show'ry	Cloudy
23			32	35	30	.76	.75	71	73	NE	E	Fine	Fine	Foggy
24			33	38	34	.57	30.02	73	73	NE	NE	Fine	Fine	Fine
25			36	39	35	36.13	.22	73	73	E	ENE	Foggy	Foggy	Cloudy
26			37	38	35	.16	.08	73	73	ENE	E	Rain	Rain	Cloudy
27			36	37	34	29.74	29.73	73	74	ESE	ESE	Snow	Snow	Cloudy
28			35	37	32	.96	30.06	74	73	ENE	NNE	Cloudy	Cloudy	Cloudy
29			34	35	32	30.10	.07	73	72	ENE	ENE	Snow	Snow	Cloudy
30			32	37	21	29.83	29.79	72	72	WNW	ESE	Cloudy	Cloudy	Cloudy
31			22	24	19	.79	.82	69	68	N	N	Show'ry	Rain	Fine
Feb. 1			22	25	20	.70	.72	65	67	NE	NE	Fine	Fine	Snow
2			21	22	20	.72	.72	67	67	E	E	Snow	Snow	—
3			21	24	19	.73	.78	67	66	NE	NE	—	—	—
4			26	25	19	.74	.61	66	65	NE	NE	Fine	Fine	Fine
5			21	24	14	.63	.55	65	64	NNE	ENE	Fine	Cloudy	Fine
6			16	24	20	.47	.50	64	65	NE	E	Foggy	Foggy	Cloudy
7			34	46	35	.33	.30	69	76	SW	SW	Fine	Rain	Cloudy
8			44	46	41	.28	.57	81	77	W	SW	Foggy	Fine	Cloudy
9			43	44	35	.21	.45	75	73	SW	WSW	Show'ry	Cloudy	Cloudy
10			39	39	32	.71	.33	70	69	W	NW	Foggy	Fine	Fine
11			36	42	36	30.04	30.06	69	70	NW	W	Fine	Fine	Fine
12			40	42	33	.02	.03	70	67	SSW	S	—	—	—
13			37	39	36	.03	.01	67	67	S	S	—	—	—
14			32	37	31	.13	.17	69	69	NE	NE	Foggy	Foggy	Foggy
15			33	38	35	.19	.23	70	71	SE	ENE	Cloudy	Cloudy	—
16			36	35	32	.20	.13	72	72	ENE	ENE	Cloudy	Cloudy	—
17			33	37	30	29.86	29.67	71	71	NNE	N	Cloudy	Cloudy	Fine
18			35	38	30	.61	.65	70	68	N	NNW	Fine	Fine	Fine
19			35	38	27	.65	.70	66	64	NW	NW	Foggy	Fine	—

The late frost would not admit of the Rain Gauge being put; consequently, the Rain fallen cannot be given.

### NOTICE TO CORRESPONDENTS.

Mr. F. must excuse us if we reply to his complaint, that mistakes are inevitable in printing, when the copy is nearly illegible.

We know more of the circumstances of the case than Z. imagines. If success had not marked the career of the provincial Physician alluded to, he would never have been attacked.

ERRATUM. At page 113, line 30, for "20 grains of purified opium" read "24 grains."



FIG. 1.

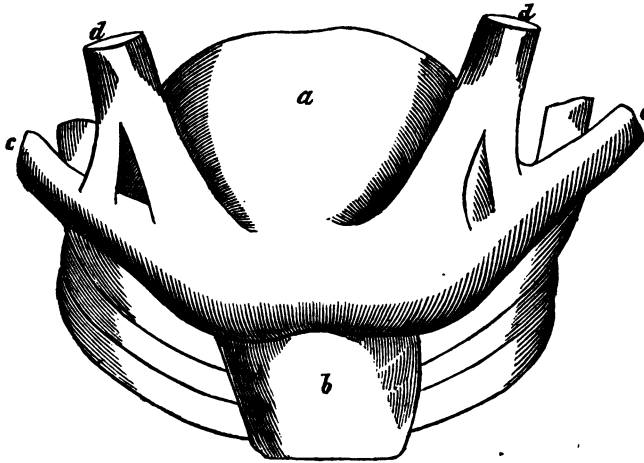
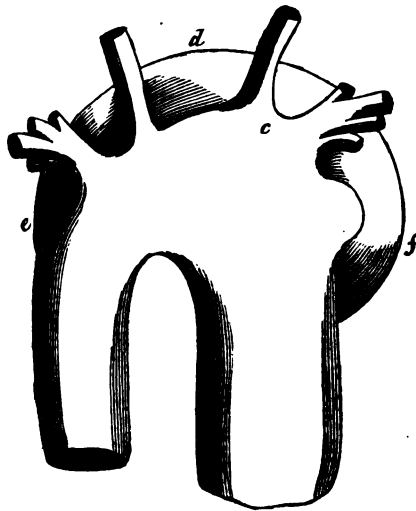


FIG. 2.



*The Drawings were made by Mr. PAXTON, of Oxford; in u  
possession the Preparation remains.*

Boyleian Lib

THE LONDON  
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APRIL 1830.

[NO. 46, *New Series*.]

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long but an invaluable series.—*Rush*.

ORIGINAL PAPERS, AND CASES,  
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER  
AUTHENTIC SOURCES.

ABSCESS IN THE BRAIN.

*Case of Abscess in the inferior Part of the right Hemisphere of the Brain; Hemiplegia of the left side of the Body; Aneurism of the right Subclavian Artery: accompanied with Adhesion of the Lungs to the Pleura on each side of the Chest; thickening and deposition of Lymph on the Pleura Costalis in the right side; and about sixteen Ounces of serous Fluid in the Pleural Cavities.* By GEORGE NORTH ROBINSON, M.D. Surgeon of the Oxford Regiment of Militia.

JOHN CARPENTER, æt. fifty-three, about six feet high, well formed, temperate, spare habit, pale fair complexion, was discharged in 1814, after thirty-two years' service in the army, on a pension, in consequence of lameness from an injury at the hip-joint, by the falling of his horse.

Until 1806 he had been healthy: in that year he had a spasmodic attack of the intestinal canal, with obstinate constipation, from drinking a considerable quantity of beer while the body was heated from great exertion, in a long march with his regiment. In 1817 he had symptoms of concussion of the brain, after being thrown from and receiving a kick from a horse, on the posterior inferior portion of the right parietal bone, (the probable cause of the hemiplegia and the organic mischief in the brain:) this accident confined him to the house several weeks. The paralytic seizure attacked him suddenly in 1826. The

aneurismal tumor was not noticed till 1827: it gradually increased, in a bilobulated, semicircular form, to the size of a moderate orange, under the sternal portion of the right clavicle, forcing it from its articulation with the sternum, and extending upwards towards the trachea. The aneurismal sac was found in a collapsed state. Had troublesome dry cough and laborious respiration latterly, accompanied with the *bruit de soufflet*, and oppressed pulse. The patient had been subject to symptoms resembling chronic catarrh about twelve years, which were doubtless owing to the gradual enlargement of the aneurismal tumor. It is a well-ascertained fact that the symptoms of thoracic aneurism, before any external swelling can be detected, often resemble those of phthisis; and the latter is sometimes actually supposed to be the disease under which the patient is labouring.

*Post-mortem appearances.* The body was emaciated, and the left arm and leg were more particularly wasted. The anterior and lower part of the neck presented a two-lobed tumor, (fig. 1, *a*,) of the size of a large orange, projecting between and above *c, c*, the clavicles. On dissecting down to these parts, and removing them for more accurate inspection, an aneurism was found to have taken place at *c*, fig. 2, the arteria innominata, which was obliterated by it, or rather had extended it to *d, e, f*, the situation just mentioned, and had caused it to assume the form here represented. The ascending aorta was enlarged, and patches of ossification were numerous in it. The inner extremities of the clavicles, and the superior part of the sternum were absorbed. As is usual in these tumors, the internal part, which was out of the line of the circulation, was filled with laminæ of coagula. The walls of the sac consist of a very firm, condensed, cellular coat, of sufficient strength to retain the clavicles in their natural line, and even to confine their disarticulated extremities in their relative situations, giving also a firm attachment to the sternal portion of *d, d*, fig. 1, the sterno-cleido-mastoideus muscles.

The brain was found to contain an excavation in its right anterior lobe, the whole of the corpora striata having disappeared, and merely a little fibrous lymph occupied its situation.

## TRAUMATIC DELIRIUM.

*Observations on a peculiar kind of Traumatic Delirium.*

By M. HELIS.

THE duty of a surgeon consists not only in carefully preparing his patients for operation, or in operating with skill and courage, but he must also exert himself to lead them safely through the various dangers which arise after the performance of the operation. The moral and physical excitement experienced by a patient who has just been operated upon, exposes him to various maladies. But there is one kind of affection which usually occurs after surgical operations, and which appears to be particularly connected with them; and it is indispensable for the operator to be as well acquainted with such cases, in order that he may complete his task, as that he should be well skilled in anatomy to perform the operation. It is, indeed, by this kind of knowledge that the scientific surgeon distinguishes himself from those who merely possess a little manual dexterity, and who are ready to exclaim with a lithotomist of the last century, "I have operated, let Providence complete the cure." From the slightest wounds the most formidable symptoms not unfrequently arise. It behoves us, then, to watch a patient with the greatest attention who has been the subject of an operation in which the most important parts have been divided. After wounds, whether inflicted by accident or the knife of the surgeon, the nervous system is often so much disturbed as to lead to a species of delirium, the precise causes of which are obscure. This mental disturbance varies in its progress: the symptoms which accompany it are sometimes very alarming, but nervous or traumatic delirium is seldom fatal, if properly treated.

The object M. Helis has in view is to illustrate by cases the advantage of the treatment recommended by M. Dupuytren, which we have ourselves seen employed with the best effect.

CASE I. *Delirium after the Operation for Sarcocoele.*

M. D. R., twenty-five years of age, of a nervous temperament, was operated upon for sarcocoele of a very large size in 1817. The day after the operation, he was restless, and very much alarmed lest hemorrhage should occur. The succeeding day his agitation had much increased; the slightest word or movement produced the greatest degree of excitement; the least sensation redoubled his appre-



hensions. Still his progress was satisfactory. He soon complained, however, of pains in his limbs and chest; his eyes glistened, he breathed quickly, eagerly demanded food, and was determined to rise from bed. His mind wandered, he repulsed those who were the most attentive to him, and called loudly for his family: his whole body was incessantly in motion. His cries, the appearance of his eyes, the fixed state of the pupil, his face covered with sweat, and his calm and regular pulse during all his agitation, convinced M. Dupuytren of the nature of the case. Particular attention, however, was paid to the state of the chest, as the patient complained of a fixed pain in that part.

When it was ascertained that he was labouring under no pulmonic disease, an enema with six drops of laudanum was immediately given; and the patient was ordered to be kept perfectly quiet, and undisturbed by friends. In an hour after the administration of the enema, M. D. R. ceased to ramble, and fell into a sound sleep, which lasted for several hours. The cure was complete in twenty-five days.

CASE II. *Delirium after Luxation of the Femur.*

A mason fell from a scaffold, and luxated the left femur. He was carried immediately to the Hôtel Dieu, and the next day the luxation was reduced with the utmost facility. The patient was dreadfully alarmed at the apparatus which was employed, and could not believe himself so speedily cured. On the following day he was extremely agitated. The eyes were unnaturally brilliant, and turgid with blood; his face red, and covered with sweat. He cried out incessantly, and endeavoured to break the bandages by which his limb was secured. In the midst of this mental derangement, the pulse was full, regular, and natural in number; temperature of the skin not increased.

The sister of the ward, who was well accustomed to these symptoms, ordered an enema with ten drops of laudanum in it to be immediately given; and no other remedy was necessary to restore the patient to reason.

CASE III. *Delirium after the Fracture of a Rib.*

Langlois, a mason, was admitted into the Hôtel Dieu with fracture of a rib. A tight bandage was placed round his body. From the facility with which such accidents are usually cured, but little attention was paid to this patient, but on the third day he was attacked with delirium, which continued unabated. He threw himself into various positions: all his muscles were in a state of continued tension:

eyes very brilliant; skin covered with sweat; pulse natural. He fancied he saw images dancing before him in the air, and that various experiments were being tried upon his bed.

As this man was of a full habit of body, he was first bled, but without relief. An enema with ten drops of laudanum was then given, and a slight degree of calmness succeeded. The next day this dose was doubled, without advantage. His cries and constant restlessness were now so annoying to the other patients, that he was put in a ward by himself, and forty drops of laudanum were given in an enema, and the delirium speedily subsided.

CASE IV. This patient had attempted to commit suicide by cutting his throat. On the second day after the attempt he became delirious, and it was necessary to restrain him by the strait-waistcoat.

An anodyne was first given by the mouth, with but little effect; but an enema with a few drops of laudanum quickly restored him to reason. On the fourth day the wound assumed a bad appearance; the delirium returned, and was again successfully opposed by the same treatment.

CASE V. This patient was operated upon for popliteal aneurism. He was of a plethoric and athletic constitution, and a free bleeding had been practised, to guard against accident after the operation. He appeared to be indifferent to every thing that was done, and scarcely conscious of what was passing around him. On the fifth day he was attacked with furious delirium, without fever. The symptoms were the same as those detailed in the previous cases. An anodyne enema was given with the most complete success. The ligature, however, came away from the femoral artery prematurely, and the patient expired on the fortieth day, after many attempts had been made to arrest the hemorrhage.

CASE VI. In this case the patient had attempted self-destruction by cutting her throat. Delirium afterwards occurred, without fever or symptoms of inflammation. Anodynes, internally given, were effectual in relieving it.

M. HELIS is not aware that any author has paid particular attention to this species of delirium. He has only found one example of it in books. Many surgeons have, indeed, spoken of the violence of some patients after operations, and of their tearing away their dressings; but none have inquired into

the cause of this kind of insanity, or have endeavoured to relieve it by any other means than coercion. The danger of so violent a kind of delirium after various accidents and operations, must be evident, and it must be a source of much gratification that we possess a remedy which is almost certain in its operation. M. Helis imagines that it may generally be possible to predict the occurrence of this mental disturbance, either from the nature or duration of the operation, the character of the patient, his moral energy or physical disposition. There are some symptoms from which delirium may be almost certainly anticipated. If, a few hours, or one or two days after a fracture, an attempt to commit suicide, or any operation, the patient appears unusually gay, talks much, has a quick expression of the eyes, gives short answers, moves quickly and without any obvious motive; if he affects great courage and resolution, the surgeon should be upon his guard. The slightest excitement should be avoided. The patient should be kept in the most complete repose, away from light, noise, or unnecessary visits, or his symptoms will quickly become more decided. He will soon begin to talk unconnectedly: at one moment his language will be mild, at another violent: his loquacity will be incessant. In this state the patient is dangerous to others and to himself. In one case M. Helis mentions, a man rose in the middle of the night, and beat many of his companions with his crutch, and would probably have destroyed some of them if he had not been secured. In some instances patients have precipitated themselves from a window, or have destroyed themselves in a still more horrible manner.

The most remarkable circumstance in the midst of so much disturbance of the mental faculties, is the tranquil state of the circulation, and the absence of febrile symptoms. The patient is furious, has lost all command of himself; his face is bathed with sweat, his eyes are unusually brilliant, he cries out vociferously, and might be thought to be labouring under the most ardent phrensy; but his pulse is calm and regular, and the state of the skin removes all suspicion of inflammation. It is, in fact, a true mania, differing only from ordinary cases in its duration. M. Helis has rarely seen the attack last longer than five or six days.

The mode of subduing it is as simple as it is efficacious. It consists of a few drops of laudanum administered in a clyster. It is this remedy which M. Dupuytren constantly employs, and it is far preferable to every other. Five or six

drops of laudanum given in a small clyster produce more effect than thrice the quantity taken by the stomach. This fact may be explained by the sympathy which unites the brain with the rectum. As a proof that this sympathetic connexion is not imaginary, we may cite various cases of pains in the head, delirium from constipation, the clear and active state of the mind which follows a required evacuation from the bowels, and instances of hemicrania that have resisted every other treatment, and which have yielded, as if by enchantment, to irritants placed in the rectum. But a physiological explanation may be adduced. The stomach, destined to elaborate the first element of nutrition, is endowed with a digestible power, and with secretions which alter more or less every substance which comes in contact with it; and many medicines introduced into the stomach are ineffectual, because they are mixed with the food, or their powers are weakened by the gastric juice. Hence various medicines, particularly of the vegetable class, are uncertain in their operation, or totally inefficacious with many patients. The rectum, destined to be the reservoir of the residue of digestion, absorbs, but does not digest, and it will easily be conceived that medicines which are introduced into it, provided they are not expelled, will act with more certainty than if they were administered by the stomach.\*

The treatment recommended by M. Helis in cases of traumatic delirium, has been practised with much success in several of the London hospitals, but we know it is not yet duly appreciated by the profession at large. Two instances have occurred to us, in which anodynes had been given by the mouth without benefit. In both, the exhibition of an enema with fifteen drops of laudanum speedily quieted the turbulence and incessant loquacity of the patients; a calm sleep followed, and health was soon restored.—EDITOR.

#### OTITIS.

*Remarks on Otitis.* By GEORGE F. LEHMAN, M.D.,  
Lazaretto Physician of the Port of Philadelphia.

It has been observed by distinguished authority, that inflammation of the ear is generally limited in its extent, and seated so far out of our reach, that bleeding is seldom employed; nor is the constitution so much affected as to render any general remedies necessary.

\* *Repertoire Général, &c.* Condensed.

Several cases of unusual violence having fallen under my notice, which required corresponding measures for their relief, and entertaining an idea that the pathology and treatment of this affection are not sufficiently elucidated, the following observations are made.

The causes of otitis are generally those which create inflammation in other parts; such as exposure to cold, particularly a current of cold air, or the direct application of snow, ice, or cold water to the ear; mechanical violence, the introduction of exotic substances, as a ragged bone, a cherrystone, or worms, insects, or the larvæ of insects, into the ear; many cases of which are on record. I once witnessed a severe inflammation of the ear occasioned by the sting of a wasp.

When inflammation is confined to the meatus auditorius externus, it is characterized by slight pains in the ear, and is relieved by the introduction of a few drops of Thebaic tincture, tincture of Digitalis, Oleum Olivæ, or Oleum Amygdalæ, into the ear, and warmth applied by flannel.

In this state of the disease, the application of a few drops of the tincture of Digitalis usually affords as much relief as any other remedial agent. Stimulant errhines may be also used with advantage.

The causes of this infection are not to be overlooked in its management. If it depends on the presence of foreign bodies, they must be extracted; if on insects or the larvæ of insects, the proper remedy to suffocate them will be a few drops of olive or almond oil dropped into the meatus externus.

In common cases, indicated by slight pains only, and brought on by the direct application of cold, the disease depends very often simply on the constriction of the excretory ducts of the glandulæ ceruminosæ; to relieve which, the appropriate treatment is warm fomentations, to restore the ducts to their natural action. Sometimes the introduction of tepid water or steam will be sufficient.

If the inflammation extends to the membrana tympani, the pain is sharp, lancinating, and throbbing, reaching to the temporal bone. The brain is often affected, creating delirium; the tongue is furred, and the action of the heart much increased. The disease advancing, suppuration follows, and a discharge takes place.

Sometimes the membranes of the brain are affected, causing phrenitis, and the temporal bones become carious, and death is occasionally the consequence.

Dr. Powell, in the Medical Transactions, vol. v. p. 212,

relates the case of a lad of sixteen years of age, who had suffered two attacks of otitis preceding the fatal one, in which the pain was intense, yet the pulse never exceeded seventy-two, and the operations of the mind were unimpaired.

When we consider that the *membrana tympani* is stretched very tensely over the tympanum, and is chiefly formed of the periosteum, it can excite no surprise that the pain is so very excruciating in inflammations of this membrane. Besides, it has an abundance of small vessels, supplied by the stylo-mastoid and temporal arteries.

So extreme is the sensibility of this membrane, and the sufferings of the patient so acute, that his reason is often affected; but the suppurative process advances with rapid strides to relieve his agony, and the parts afterwards, in a great majority of instances, heal kindly and in a short period.

No stronger proof exists of the *vis medicatrix nature*, than the general tendency of all inflammations to the surface. It is an instinctive effort of nature to save her vital parts from the presence of matter, which, from its irritating qualities, would bring about very serious consequences. This observation, indeed, applies to all the great cavities of the body; innumerable instances in support of which might be derived from morbid anatomy, which must be familiar to all practical men. If an inflammation attack the peritoneum covering an intestine, and adhesions are hereby produced between the two, the inflammatory action works upwards through the thick walls of the abdominal muscles, while the proper coats of the intestines in most instances remain sound. We even find that if abscess form in a frontal sinus from an obstruction in its duct, the matter will rather work its way through the frontal bone, than descend into the nose. In like manner, if an inflammation attack the cellular membrane on the outside of the rectum near the anus, although the latter be in contact with the inflamed part, the inflammation will extend to the skin of the buttock, while the gut itself is often but little affected.\*

If the inner surface of the tympanum or labyrinth becomes inflamed, the disease assumes a very important character. The pain is continued and most excruciating; coma or delirium is common; the pulse is much excited, and in every instance the constitution is affected; suppuration takes place; the pus finds a lodgment in the labyrinth;

\* Good's Study of Medicine, vol. ii.

the bones become carious, and total deafness follows. The whole structure of the ear is destroyed, even the bones are sometimes discharged through the meatus auditorius, with very fetid matter, and fistulous ulcers supervene upon this, which are very troublesome.

In a few rare instances the inflammation has extended to the brain, affecting the membranes and surface of the organ, and coating them with coagulable lymph, pus, or both. As the disease approaches this condition, topical applications are of no avail. We must now have recourse to active and copious depletion, and the first and most beneficial is venesection, which may be carried to a great extent.

Active purgatives must always be resorted to: it matters not whether calomel, castor oil, or the saline purgatives are used, so that the doses are liberal enough to act freely and promptly. After this is done, cupping, leeching, and blistering behind the ear, are very salutary. The hot pediluvium is occasionally serviceable.

So soon as the arterial excitement is diminished, the pain is usually relieved, at all events to a certain degree; then the introduction of a few drops of the tincture of *Digitalis* into the ear will be proper.

When, however, the disease does not yield to this treatment, and the pain continues severe, we must depend on narcotic cataplasms and fomentations to moderate it, until suppuration takes place, and pus is discharged from the external meatus, which usually affords a cessation from pain. Tepid water, or milk and water, are then to be injected repeatedly into the ear to wash it out; or you may syringe the ear now and then with gum Arabic water, or any other mucilaginous infusion, and mild astringent decoctions, and in a short time the parts will be restored to their usual healthy condition. The regimen, during the continuance of inflammation, ought to be cooling and light.

There is a species of earach denominated nervous. It is generally symptomatic, and is almost always the effect of gastric irritation, or some irregularity in the alimentary canal. An active cathartic generally removes it, with the insertion of a few drops of Laudanum, Ether, or the tincture of *Digitalis* into the ear.

I have attended a lady, the mother of seven children, who is first warned of her conception by a severe earach. It happens occasionally until the sixth month of her pregnancy, when it entirely disappears. Twice I applied mustard cataplasms behind her ear; but she has been usu-

ally relieved by the introduction into the external meatus of cotton impregnated with the tincture of *Digitalis*, preceded by a gentle dose of Sulphate of Magnesia.

If a diseased tooth is the cause of earach, it should be extracted, or remedies applied for the relief of pain to the tooth. For this purpose opium and camphor may be applied directly to the tooth, or ether on the cheek of the affected side.

In the decline of malignant fevers, earach sometimes supervenes, which, when severe enough to require medical attention, is overcome by the common topical applications. Sialogogues are recommended by Dr. Good.

Dr. Kennedy, of Glasgow, has broached a new practice in the treatment of acute inflammatory earach. The following case illustrates his pathological and therapeutical views.

“D. G., a lad of sixteen, of full habit and healthy, experienced a general chilliness, and other feelings of discomfort, in the evening after travelling in a stage coach, the windows of which were occasionally let down during the journey. At the same time the atmosphere was moist and cloudy, while a cold wind blew from the north-east, and his right side was in consequence exposed to its action. At night he bathed his feet in warm water, had a warm drink, and went to bed, complaining very much of sharp wandering pains in the throat, neck, and right side of the face, with increasing difficulty of deglutition, and a stinging, deep-seated pain in the ear. Next morning early he was roused from an unfreshing slumber by a severe paroxysm of earach, accompanied with aggravation of all the precursory symptoms. For that day and the following, he was subjected to the discipline of a domestic treatment, composed chiefly of saline aperients, in defective doses, frictions of the throat with ammoniated liniment, and the insertion of Laudanum on cotton into the affected ear. Such means, however, proving insufficient, the disease progressively advanced, and late on the third day came under my observation as a true otitis, distinguished by the certain signs, local and general, of inflammatory excitement. On this occasion, slowness of the bowels, loaded tongue, heat and constriction of the skin, hoarseness, headach, with throbbing of the cephalic and cervical vessels, difficulty of swallowing, sense of cold all along the spine, excessive sensibility, and tumefaction of the right side of the face, eyelids, and neck, and an excruciating pain within the ear, which underwent intense exacerbations, with much disturb-



ance of the respiratory and sanguiferous functions, afforded the grounds of a therapeutical indication.

"Without loss of time, an active emetic (thirty grains of Ipecacuanha and three of the Antimonial Tartrate,) was administered: its effects were powerful, but not excessive, and the advantages derived from them were immediate and decisive. Before the last paroxysm of vomiting ceased, all the more urgent symptoms had nearly subsided; and the patient, on reclining himself to rest, soon fell into a tranquil sleep, during which a general and profuse perspiration supervened. Before midnight three copious alvine dejections were obtained; and he passed the morning in a state of uninterrupted repose."

Dr. Kennedy concludes, from the history of this case and others, that acute and even complicated otitis may be subdued by emetics and cathartics, without the assistance of bloodletting.

I have pursued the course here adopted in two similar cases, but without the same fortunate result. In both instances bleeding topically, blisters and warm fomentations, eventually overcame the inflammatory diathesis. Indeed, from direct experience and analogy, it is very doubtful, in the acute forms of the disease, simple or complicated, whether any other remedial agents would accomplish the cure. The usual characteristics of inflammation on visible parts are heat and pain, redness and increase of the part diseased, and no doubt similar changes exist in all internal inflammations, or those which are not ocular. It is at first limited to a point, but by continued sympathy embraces contiguous parts, and sometimes parts so remote as to excite no little astonishment.

Mr. Hunter explains very beautifully the origin of inflammation, by comparing it to a blush, or a simple increase of the diameter of the vessels in consequence of the application to them of the irritant, whatever it may be, which originates this new action.

H. S., mate of the schooner Maryland, had a severe attack of bilious fever, June 1827, directly after leaving the port of Tampico.

In consequence of lying under the steerage hatch, on the night of June 27th, in a hard shower of rain, and high wind from the north-west, his left ear being exposed to their combined influence, the next morning he suffered severe pains in his ear and temple. He vomited almost incessantly for several days during the incipient stage of his fever, which afforded no relief to his earach, but, on the contrary,

increased the paroxysms. Eventually he came under my care in the Quarantine hospital, in a very reduced and feeble condition; and the pain in the ear was mitigated, and at last cured, by the repeated application of blisters behind the ear, and occasional purges.

Nevertheless, it is probable that, when the excretory ducts and vessels of the ear partake of the collapsing influence of cold, in common with the head, and soreness of the face and stiffness of the cervical muscles prevail in addition to the pains of the ear, relief may be procured by the nauseating effects of emetics, creating an increased excretion of the salivary glands and Schneiderian membrane, and relaxing the extreme vessels in the meatus externus and contiguous parts.

My practice is, when called upon to prescribe for otitis, where the general system and brain are not affected, to direct a purgative medicine, pediluvium of hot water, and cotton impregnated with the tincture of *Digitalis* inserted into the ear. It has afforded, according to my observation, (*cæteris paribus*,) more alleviation than laudanum. But to depend upon that or any other medicine wholly, when the constitution is affected, would not be consonant to sound therapeutical views. The general symptoms, idiopathic and sympathetic, must not be neglected.

The following cases are offered in illustration of my views and practice, in this painful and sometimes dangerous affection.

CASE I. J. S., seaman, aged twenty-four years, a stout, robust man, slept on the deck of a vessel on the night of September 30th, 1823. The early part of the evening was clear and sultry; during the night the wind hauled round to north-west, and blew fresh for some time, and was followed by a hard shower. At daylight the thermometer was 47°. The rain awakened him, he went below and fell asleep in his wet clothes.

October 1st, P. M.—I was requested to visit him. Complained of a dull pain in his right ear, which had been exposed, considerable weight in his head, and indisposition to eat.—R. Hydr. Submur. gr. xx.; Convol. Jal. gr. xx.; and a bandage of flannel to be bound round the ear.

2d.—The medicine operated copiously; passed a very restless night; pain in his ear sharp and lancinating, extending to the temples; pulse ninety-six; tongue slightly furred.—Venesection 3xx. R. Sulph. Mag. ʒi.; and apply a blister behind the ear. During the day experienced a little relief.

3d.—In great agony, and flighty all night. Pain in his ear continues sharp and cutting; pulse full and strong; very irritable.—Venesection  $\bar{z}xx$ . Renew the epispastic, and give *Ol. Ricini*  $\bar{z}i$ . Tepid water to be injected into the external meatus. Symptoms much increased during the day. At night the pain returned with great severity. I dropped ten drops of the tincture of *Digitalis* into his ear, placed in the meatus cotton impregnated with the tincture, and administered forty drops of *Laudanum*.

4th.—Slept well the latter part of the night; entirely free from pain this morning. The disease was completely subdued, and he had no return of it.

CASE II. R. B., a shoemaker, aged thirty-one years, was engaged with a companion in a pugilistic affair on the 22d of February, 1825. During the fray, his antagonist struck him on the left ear with a large stone, which, from the violence of the blow, terminated the conflict.

On the 25th, when I first saw him, complained of severe pain in his ear. It was tumefied, and the external meatus filled with coagulated blood. I ordered twenty leeches to be applied behind the ear. *R. Sulph. Mag.*  $\bar{z}i$ .; and the coagulated blood washed away with warm water.

26th.—Pain in the ear excruciating, extending to the crown of the head, and stiffness of the cervical muscles.—Venesection  $\bar{z}xij$ . *R. Ol. Ricini*  $\bar{z}i$ .; and a pediluvium of hot water.

27th.—Passed a very uncomfortable night. This morning flighty, incoherent in his observations; pulse eighty-six.—Venesection  $\bar{z}xvi$ . *R. Ol. Ricini*  $\bar{z}i$ .; and a common bread and milk poultice applied over the affected ear.

28th.—No better; pains lancinating through the ear and side of the face.—Venesection  $\bar{z}xiv$ . A vesicatory behind the ear. *R. Sulph. Mag.*  $\bar{z}i$ .—P.M. Much relieved.

March 1st.—Passed a tolerable night; pain confined entirely to the ear, and throbbing; general excitement alleviated. Directed warm olive oil into the ear, a pediluvium of hot water, and the blister to be dressed with basilicon ointment.

2d.—Pus discharged from the external meatus; violent symptoms all gone. Tepid water injected two or three times a day to carry off the pus.

A moderate discharge continued for a few days, and then ceased; all constitutional irritation terminated. A dull and heavy pain remained for sixteen days, which was meliorated, and eventually ceased, upon keeping cotton saturated with the tincture of *Digitalis* in the ear.

I do not assert that the tincture of *Digitalis* cured these cases: unquestionably much is to be attributed to the previous reduction of the phlogistic diathesis by venesection, &c. Relief, however, speedily followed the application of *Digitalis*, especially in the first case. This medicine, it is notorious, has a direct and powerful sedative influence on the arterial system when taken into the stomach; and why may it not operate externally in a like manner? My object, however, is to state facts, and not to theorize.

That *Digitalis* reduces vascular action, is indisputable. Some eminent physicians have confided so much in its sedative powers as even to make it a substitute for the lancet in the incipient stages of inflammation. Although this practice cannot be approved, there is strong reason to believe that, like opium, it has been excluded in cases of reduced arterial excitement, when prompt and permanent benefit would have succeeded its administration, both internally and externally.

That the capillaries of the part are always the seat of inflammation, is well established by Bichat; and the physician who has never seen a speedy reduction of topical inflammation by local remedies, after the failure of the most copious and general evacuations, has had a very limited experience, or been culpably negligent in his observations.\*

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PREMATURE DELIVERY.

*Observations on the Causes and Prevention of Premature Delivery and Death of the Fœtus.* By JAMES RUSSELL, Surgeon and Accoucheur.

EVERY practitioner in midwifery must have met with numerous patients who have been delivered in consequence of the death of the fœtus having occurred during the progress of utero-gestation. He must also have been struck with the remarkable circumstance, that the same patient has been repeatedly delivered of premature children, mostly stillborn, and at nearly the same period, where the state of health of the patient could not account for the event. These circumstances occur with a degree of frequency which can scarcely be suspected by those not conversant with the practice of midwifery: they are of constant occurrence in extensive practice in that department of the profession.

The cases to which these observations are intended to

\* American Journal of Medical Science.

apply are, where the death of the fœtus takes place after the twentieth week of utero-gestation, without any direct or evident cause; and to the premature birth of unhealthy children, more particularly where either of these occurrences is repeated in subsequent pregnancies.

It will afford no small gratification to the medical inquirer to learn that there exists a certain and simple remedy for these affections, which has succeeded with a uniformity of result not usual in the ordinary effects of medical agents. The remedy which has been found so successful is mercury,\* continued for a considerable period; and the conclusion which led to this practice was the conviction that all these cases depended on the syphilitic poison, and were curable by the same means.

In the early part of the writer's professional career, his attention was called to some strongly marked cases, where the influence of syphilis was clearly traced, and its effects upon the fœtus unequivocally ascertained. The striking analogy between the clearly marked and other cases which occurred about the same time, but where this disease could not be so traced, led him to adopt this mode of practice; the success of which has been confirmed by continued experience in numerous cases, with one uniformly successful result.

There is no fact better known in medicine than that of the influence of the venereal disease in destroying the life of the fœtus in utero.† It would be needless to call the

\* It is remarkable that, Dr. COLSON formerly house-surgeon of the Hôpital des Veneriens, published, some time ago, in the Archives Générales, an elaborate paper, for the purpose of showing that menorrhagia, amenorrhœa, and abortion, are very frequently caused by the influence of mercury. Dr. Colson illustrates his opinion by a series of cases, which certainly appear to bear him out in his inference. He enumerates six cases where the premature expulsion of the fœtus was apparently referrible to the action of mercury. Dr. C. remarks, that miscarriages are very common in the venereal hospitals at Paris, though this accident is usually attributed to the syphilitic complaint, and not to the mercury employed for its cure. He is of a different opinion, and attributes the abortions to the mercury: he supports this opinion by various arguments. We have frequently exhibited mercury to pregnant women, for syphilis and other diseases, and no facts have occurred to our observation tending to prove that this remedy, when cautiously employed during pregnancy, at all interfered with the course and natural duration of utero-gestation, or the health of the infant.—EDITOR.

† The following extract from Mr. BACOT's Treatise on Syphilis, p. 254, is directly in point, and confirms the efficacy of Mr. Russell's practice:

"Mr. HAY mentions a circumstance (Med. Chir. Trans. vol. 7.) which has lately been insisted upon more forcibly by Dr. O'BRIEN; it is this: a woman shall repeatedly miscarry at the end of the seventh or eighth month, and be delivered of a dead child: or, if the child be born alive, it exhibits all the appearances of disease, and soon dies. Dr. O'Brien, whose paper is published

attention of the medical profession to the fact of mercury remedying this state, it being already perfectly understood. The extent, however, of the influence of this poison on the life and health of the fœtus has not yet been fully investigated, and a further inquiry into its effects becomes of great practical importance. It is desirable to ascertain whether its influence is not greater than is generally suspected. The object of these observations is to call attention to this subject, and to the important fact that almost every case of the description before mentioned is remedied by the same means as the cases clearly traced to the syphilitic poison.

The circumstance of mercury being so beneficial in every case of this nature, and the similarity of symptoms, lead to a well-grounded suspicion that they have a common origin, and that, however difficult it may be to trace the poison, it must nevertheless have existed at some former period in one of the parents. The uniform success of mercury can only be accounted for on the supposition that this affection depends on the same disease which is cured by this remedy. It is one of the few specifics we possess, and we must either infer that it has additional specific properties besides those it exerts in syphilis, or that its uniform efficacy depends on its remedying an effect of this disease. It is more difficult to procure correct information on this point than any other in the whole range of medical inquiry. The parents have probably been many years beyond suspicion and in perfect health. An inquiry of this nature requires to be conducted with a great degree of caution, for even a slight insinuation might entirely destroy the peace of a family, as nothing is more likely to distress the mind of either parent than the

in the *Trans. Coll. Phys. Dublin*, relates many cases of this kind, and assures us that he has in several instances of this kind been led to the belief of a syphilitic taint lurking in the constitutions of the mothers, and that his suspicions have been confirmed by the result of a course of mercury, which has not only restored the health of the patients (previously valetudinary), but has enabled them to become mothers of living and healthy children. I cannot say that I have any evidence of my own to offer on this subject. I mention the facts as related by the above respectable authorities, and it will be worth the young surgeon's attention, in after-life, to bear in mind what they have urged, should such or similar instances come under his observation. Certainly where a female, formerly in good health, has declined without apparent reason, where she is repeatedly miscarrying at one particular period of her pregnancy, or bringing forth puny children, dying almost as soon as they come into the world, it may not be amiss to turn our attention to the probably syphilitic source of her misfortune, and, by gentle beginnings, to try the effect of a mercurial treatment; and, if the above authors are to be believed, the result will be most satisfactory."—EDITOR.

supposition that a cause of this kind has blighted their hopes of offspring, and rendered them childless.

Little dependence can therefore be placed on direct evidence respecting the previous state of health of the parent most liable to suspicion: it is evident, however, that there exists, in most instances, no other suspicion of syphilitic poison than this state of the fœtus, and we are induced to argue its existence from the strong analogy in the symptoms and the effects of mercury already detailed. If this correspondence in symptoms and remedy should be admitted as proofs of its existence, it proves the remarkable fact of its existing for many years lurking in the constitution, and may lead to important conclusions in the treatment of this disease, as far as depends on a more continued use of mercury.

The writer does not seek that any higher authority should be given to his opinions than what is drawn from the analogy of symptoms and the success of the treatment; for he must confess that he has been deterred from minute investigation by the reasons before mentioned, and has pressed his inquiries less strictly than he should have done had he considered this distinction necessary to the success of his practice. The assertion, therefore, of the common origin of all cases of this nature requires further practical investigation.

Whatever opinion may be formed as to the correctness of the theory, it is of less importance than the fact that all these cases are remedied by one common remedy; and this statement rests on very different grounds from the opinion respecting their origin. It has been founded not on reasoning, but on continued experience in numerous cases, although it will not be disputed but that cases may occur where the remedy will fail; yet the writer has hitherto met with no instances of this kind, and he unequivocally declares that every case of this nature which he has hitherto met with, where the remedy has been fairly administered, has been followed by success.

It may be inferred that this favorable result might have followed had no mercury been administered, and that the patient, having had one child born under such circumstances, would have had a healthy child at the full period without its aid; but it has so happened that almost every case in which it has been administered has been where the patient has had more than one premature labour, with similar symptoms in each; clearly showing that there was

some cause in operation independent of accident to produce this effect. Many of the patients had not been seen until after repeated premature births, others had neglected the precautions until the same result proved to them the necessity of attending to the directions they had received, and others again neglected these directions from probably the unworthy motive of being freed from the trouble of a family.

There are two kinds of this morbid affection: one where the fœtus is stillborn, and has been dead some time; the other where the fœtus has been born alive.

The first affection never occurs before the twentieth week, but may supervene at any subsequent period of utero-gestation. There are no precise symptoms which indicate the probable occurrence of this diseased state of the fœtus. The patient, however, usually suffers more from those anomalous symptoms which accompany pregnancy; there frequently appears more general derangement of the system, and the complexion is often paler and more sallow than in ordinary cases. The most frequent period for the appearance of this state is a little before or about the seventh month. The patient, having suffered more or less as above stated, feels the flaccidity of the breast, the sinking and coldness of the abdomen, and the loss of motion, which indicate the death of the fœtus: these symptoms may remain stationary for one or two, or even three, weeks before labour comes on, but it mostly succeeds in about a week or ten days after these indications have appeared. The liquor amnii is generally in greater quantity than ordinary, which often makes the patient appear far advanced in pregnancy, or gives rise to the suspicion of twins. The sanguineous discharge during labour, and the lochia, are generally less in quantity than in natural birth. At whatever period of utero-gestation this affection occurs, the symptoms are nearly the same; and if this state be not arrested, the patient who has been delivered at one time will generally be delivered in a subsequent pregnancy, with the same series of symptoms occurring at the same period. The fœtus having in most cases been dead many days, prevents any minute appearances being exhibited beyond the ordinary signs of putrefaction, which necessarily ensue from the long retention after death. There is in these instances no appearance of the child which can enable us to distinguish this state from the appearances exhibited in death arising from evident causes, and where the fœtus has been retained equally long in the uterus.



There is another state of the *fœtus in utero* which is more rare, but, however, is not peculiar to this affection; for these appearances were seen in a singular case, where a patient, between seven and eight months advanced in pregnancy, had the regular pains of labour for some hours, and they then subsided. She was subsequently delivered at the full period of a healthy child, and of another which exhibited the appearances about to be described. The *fœtus*, instead of the usual large proportion of liquor *amni*, is surrounded by a small quantity of a yellow, semi-opaque, and inodorous fluid, having much the appearance of turbid bile; the limbs and body of the *fœtus* are remarkably shrivelled, of a whitish appearance, and without any smell. This state appears to be the commencement of the conversion of the *fœtus* into adipocire.

There are other cases, again, where the child appears to have been alive up to the time or nearly the time of birth, and where the putrefactive process has not begun, the skin of the extremities will, however, be found to peel off more readily than might be expected in children, whose death has taken place just before or during birth.

The second description of cases is where the child is born prematurely, and lives either a short time or survives to a considerable period: these premature births may also take place at any time after the twentieth week; but when this occurs before the seventh month, as might be expected, the child merely gasps for a short time, and then expires. Where *utero-gestation* has continued to the period of seven months, the child may survive for a considerable time, but most frequently dies in a few hours. In many of these instances it will be found, on examination of the body, that the skin of the hands and feet is raised in distinct round vesications, from which the skin peels off on the slightest touch; the body, and more particularly the abdomen, will be found, on close examination, to be covered with spots, but without vesication. These are likely to escape notice, unless the body is washed with a warm sponge, or has been placed in a warm bath. Where this affection of the skin exists, it can scarcely be doubted that this state of the *fœtus* has proceeded from a venereal taint, the eruption having much the appearance of venereal eruptions.

In other cases, again, the child is born about the seventh month, or a little later, but presents no unusual appearance, except being attenuated and weakly. It generally puts on early the appearance of wrinkled old age, and

sinks from marasmus, or from the first infantile disorder by which it is attacked. It is with some difficulty that this kind is recognised as belonging to this class of affections, and it is often only discovered by repeated pregnancies occurring with similar appearances. The effects of mercury are as decidedly beneficial in this as in the other cases described.

Cases of death of the foetus, or premature labour, occurring from other sources, may, in almost every instance, be traced to some evident cause; to accident, fright, illness of the mother, or malposition of the child or placenta: they are usually preceded by severe pains commencing some time before actual labour, by (in many cases) considerable or even severe hemorrhage, and the foetus is rarely dead for any long period.

It is likewise important to distinguish between these cases and ordinary abortion, occurring between the eighth and sixteenth week. Although patients may miscarry repeatedly at the same period of gestation, it by no means follows that the abortion proceeds from this source, or possesses the characters here described. No instances of this affection have occurred until after the time a patient is considered safe from abortion, and the symptoms are in other respects totally dissimilar.

It would be tedious to enumerate the various cases in detail: the most frequent kind is where a patient has been delivered twice, at the same period of gestation, of a still-born foetus, and has subsequently been delivered of a fine healthy child at the full period. In some instances, patients have been delivered four times of children, each time in the same state, and at the same period of gestation. From the use of mercury, they have the fifth time been delivered of fine healthy children at the full period. Two cases of this kind have very recently occurred: one had always been delivered at seven months, the other at nine; with both, the children had always been stillborn.

Mercury has been administered in the same manner in almost every case: the use of it has been commenced when the patient has been about three months advanced in pregnancy; from five to eight grains of the Pil. Hydrarg. have been given twice or three times a day, and has been continued for about six weeks, diminishing the quantity as soon as the patient has complained of a little unpleasant taste in the mouth. It is desirable to produce this effect, but it is necessary to avoid carrying it further. At the termination of this period, the medicine has been discontinued for a

month, then resumed for four or five weeks, again discontinued for a month, and then resumed for four or six weeks after the seventh month.

It is not intended to affirm that this quantity is absolutely essential, nor has it been attempted to ascertain the smallest quantity necessary. The operation of the medicine is attended with so little inconvenience, and so commonly answers the purpose of the purgatives usually required, that the patient imagines the medicine has no other effect; her health and appetite often improve under its use. It is, however, necessary to prevent the irritation of the bowels which mercury so often induces, and to combine it with more or less opium where this effect is produced. One instance occurred where the patient having taken mercury after two premature births, and of dead children, was delivered of a full-grown live child. She omitted the medicine in her fourth pregnancy, and the unfavorable result again followed; in her fifth pregnancy, she resumed the use of mercury, with the usual effect. It will, therefore, be proper to continue the use of this remedy in each subsequent pregnancy, although perhaps not to the same extent.

It will be perceived that the foregoing observations apply to a large majority of the cases of death of the fœtus in utero, and a great proportion of the cases of premature labour which occur in practice. The subject thus becomes of considerable interest. If an estimate may be formed from the number of cases of this description which are seen by individual practitioners, the whole number which occur in this metropolis alone must be very great. Should the efficacy of this remedy, and the extent of its application, be confirmed by the general experience of the profession, it will lead to a most important preservation of human life.

It too often happens that a remedy which appears to have succeeded with the individual who recommended it, with surprising efficacy, loses all its reputation in the hands of others. On this ground it must necessarily be expected that the confident assurance respecting the nature of this affection, and the remedy for its removal, will be received with considerable suspicion; but the subject is one of easy investigation.

The uniformity of treatment, and the assurance of success, will, if the observations are correct, at once enable the subject to receive that confirmation by the experience of others which is necessary to produce public confidence, and render it an established mode of treatment.

*Broad street, Golden square.*

## FUNCTIONAL DISORDERS OF THE SPINAL CORD.

*Observations on Functional Disorders of the Spinal Cord, and their Connexion with Hysterical, Nervous, and other Diseases; illustrated by Cases, selected chiefly from the Reports of the Pallas-Kenry and Currah Dispensaries.*  
By WM. GRIFFIN, M.D. and D. GRIFFIN, M.R.C.S. Limerick.

(Continued from page 215.)

*Respiratory System.*

THERE are no parts of the human frame so easily excited, or so sensitive to the existence of irritation, as the respiratory system, by which we would be understood to mean all those parts or organs whose actions are usually associated in the act of breathing, and not any assumption with respect to Mr. C. Bell's theory. This extreme excitability accounts for its derangement, to a greater or lesser degree, in the diseases of almost every organ of the body, and renders it more incumbent on us to understand clearly the symptoms which may be referred to mere disturbance of function.

The most frequent symptom of irritation of the cervical and upper dorsal portion of the spinal cord, is cough; and if there was no other fact to prove the importance of more strict inquiry into the effects of disturbed influence of nerves, than the manner in which this has been wholly overlooked by our best medical writers, it would be sufficient. It occurs in very many forms, and connected with a vast variety of symptoms: sometimes it is hard, dry, and constant, or it comes on at certain hours in the day in violent convulsive paroxysms, with or without fever; and in either of these characters, it will generally be found accompanying gastric and liver affections; sometimes uterine or dental irritation, or that produced by intestinal worms; it occasionally occurs like common cold, accompanied by slight oppression, and it is in this form it appears in the general run of spinal cases, but is seldom, as in the foregoing, attended by expectoration. Lastly, it may be met with, slight, short, and little troublesome, just as it occurs in tubercular phthisis, and often in connexion with such symptoms as lead to the supposition of the existence of that fatal disease.

Spinal tenderness may be found in all these cases; and, as has been so often stated, may keep up the symptoms, after the cause in which it originated has been removed. Mr. Burns seems to apprehend that, in young females, if the spinal affection is overlooked or neglected, consumption

may be induced. That irritation at the trunk of the respiratory nerves may induce tubercular inflammation as readily as when acting on their minute fibrillæ in the bronchial membrane, there can be no possible doubt; but this can only be admitted with respect to cases in which a phthisical diathesis prevails. Numerous instances have occurred to us in which most harassing cough was kept up for months, and even years, by irritation of the cervical portion of the medulla, without inducing any more formidable disease. One case only we recollect to have terminated in fatal consumption, but this was very protracted, and all our entreaties could not induce the patient to persevere in attention to the upper part of the spine, although the most marked benefit, and at one time an interruption of the disorder for months, was procured by repeated blistering: she could not be persuaded that remedies applied to the neck were of avail for what she conceived an affection of lungs. Indeed, it seems very probable that, in many cases of hereditary phthisis, the disorder commences in this way, and might be often prevented by vigilant attention. Cough may always be excited in these irritations by pressure on the tender vertebræ, and sometimes convulsive fits, or hard barking, occurs from any unusual action of the diaphragm, or accidental excitement of the mucous membrane of the lungs. Thus a sudden fit of laughter, or of crying, may bring on coughing for hours, or it may be occasioned by a stimulant vapour, or by mere mental excitement.

XXV. A young lady, aged seventeen, of delicate frame, light coloured hair, and peculiarly fair skin, was attacked with cold, which left a short, slight cough behind it, not very troublesome, but occurring frequently in the day, and accompanied by slight oppression. The oppression was greatly increased on ascending the stairs, and there was then some palpitation. The cheek was always coloured with a pink spot, beautifully defined and bright, especially in the morning. The pulse was quick and readily excited, usually 120 in a minute; the tongue was whitish towards the middle and back part, and the papillæ elevated; she had tenderness at the lower part of the sternum, and often pain there on deep inspiration, and complained of general languor and weakness. There was tenderness of all the cervical, and of the four upper dorsal vertebræ; pressure on any one of which instantly brought on coughing.

The treatment in this instance consisted in the application of ten leeches, and long narrow blisters, often repeated, to the tender part of the spine. Minute alterative doses of

the bluepill were also given, and a mixture composed of Infus. Rosæ, with Epsom Salts and Tincture of Digitalis. The most evident amendment followed the blistering: in proportion as the spinal tenderness abated, the pulmonic affection gave way, and she was quite well in a fortnight or three weeks, although the attack had existed for a considerable time previous.

We shall, in contrast with the foregoing, give the case of a young lady of the same age, in which the spinal affection was of a much severer and more obstinate character, and which yet suggested little apprehension as to the result, from the evident antiphthisical character of her conformation. In the former, one could not but be alarmed as to the possible result; while in that which we are about to relate, and in which there was beyond all measure more of complaint and suffering, no person of experience could hesitate in predicting a favorable termination.

XXVI. A lady, aged seventeen years, became affected with pain in the right side, great tenderness on pressure, sickness of stomach and feverishness. The two last symptoms were removed by purgatives, but the pain continued, varying its situation slightly from beneath the left breast to the margin of the ribs, and occasionally as low as the crista of the ileum; sometimes it changed altogether to the left side, or affected both at the same time, and was very soon attended by nervous lowness and oppression, with other hysterical symptoms. She was attacked also by continued headach and sickness of stomach, and eventually by dry, loud, harsh cough; pain and soreness of chest; frequent chilliness and inclination to shivering, with a feeling of languor and debility. There was some furring of the tongue in the morning; the appetite was bad, and the pulse frequent and irritable, usually 120 in a minute. The catamenia were regular. On examination of the spine, great tenderness of the second cervical was discovered; pressure there occasioning acute pain in the vertex and brow; pressure on the lower cervical and upper dorsal excited pain at the spot, and loud coughing; at the seventh or eighth, the same symptom, with pain of chest; and at the four last dorsal, as well as at the margin of the ribs, as far forward as the ensiform cartilage, there was extreme pain on pressure.

Leeches and repeated blistering at the tender point of the vertebral column were employed, with great temporary relief; but, when the severity of the symptoms abated at one

part, it increased at another, as if there had been rather a transference than an actual removal of irritation. Thus, she sometimes complained most of the head and stomach; sometimes of the distressing cough, pain of chest, and oppression; sometimes of the back and sides. A considerable amendment took place during the use of mild purgatives, followed by tonics; and the cough seemed at last to yield to the Sulphate of Quinine.

All the symptoms recurred, however, in an aggravated form a few weeks afterwards, in consequence of some uneasiness of mind: the cough grew more distressing, the pain in the right side, which had never wholly left her, became worse, and the catamenia appeared every three weeks. A mild mercurial course was now resorted to, not so much from a conviction that the symptoms originated in an affection of liver, as that we had reason to attach some value to its use in pure cases of spinal irritation. She had not been rubbing the mercurial ointment a fortnight, when the cough completely subsided, although resisting every other remedy for so long a period; and the general health gradually improved. Occasional blistering was still made use of, with advantage, and the side was covered with a Belladonna plaster.

There was once again a recurrence of the symptoms, after an interval of four or five weeks, but they were of a mild character, and yielded, as in the first instance, to purgatives and tonics, with small doses of opium, and to stimulating liniments applied to the spine. This last remedy was of such obvious advantage, that she declared it did her more good than all that were made use of from the commencement. Her recovery was perfect.

The hard, barking cough, which Dr. Clarke describes as affecting young females, and yielding to sudden effusion of cold water, after foiling every other remedies, was, we should suppose, a mere symptom of spinal irritation. Tenderness of the vertebræ would have been discovered, had any examination been made: nor, indeed, can we imagine a disorder of any other nature likely to be so suddenly and so perfectly relieved. The cough remaining after the acute attack of whooping-cough is over, and which is said to depend upon habit, is also perhaps dependent on an irritable state of the cord.\* Since the conjecture oc-

\* The Tussis spasmodica, which Underwood describes as affecting infants, remaining dry and hoarse under the use of pectoral remedies, but soon relieved by opiates or cicuta, is evidently of this nature. Perhaps, the same may be inferred of the cough described by Dr. Gregory, of London, as

curred to us, however, we have met with no instance to confirm it. In typhoid, inflammatory, and still more frequently in intermittent fevers, cough is often a symptom of nervous disorder, and especially disorder of the upper part of the spinal cord. It is the more necessary for the practitioner to have this continually impressed on his mind, as from its connexion in these cases with high febrile excitement, it may very readily lead him to imagine he has to contend with local inflammation.

Next in frequency to cough, and usually accompanying it, is oppression, which may occur in all its degrees, from slight dyspnœa up to the most terrific asthmatic paroxysm, as the irritation may chance to be more or less intense, or affect one set of nerves or another. When the superior or external respiratory are engaged, we have uneasy breathing and a feeling of atmospherical pressure, not perceptible while the healthy relation subsists between it and the muscular power. This is most distinctly experienced by persons slightly affected with hemiplegia: they have a sense of weight or pressure, and of obstruction to the free expansion of the lungs on the paralytic side. When the phrenic is affected, we have a sense of oppression, a difficulty of expiration, and laborious action of the external respiratory muscles. When the par vagum suffers, either the muscular coats of the minute bronchial tubes are affected, as in pure spasmodic asthma, or the nervous influence, the secreting process of the lungs, by which a change is produced in the blood, is interrupted, as in the nervous; and in both a distressing sense of suffocation is experienced. When the functional disturbance is confined to the superior laryngeal or the recurrenents, we have spasmodic action of the oblique and transverse arytenoid muscles, or loss of voice, or hoarseness, or wheezing, or croupy breathing; which last is, perhaps, owing to some change in the state of the mucous secretions.

The first species of oppression is, in its slighter degrees, a very frequent one, and is usually present in those instances in which patients complain of a load on the chest. It shall be more particularly noticed, as well as the affection of the phrenic in subsequent cases, where it formed a prominent symptom. The fact that, in many persons, the asthmatic paroxysm depends solely upon disturbance of the

dependent on an irritable state of the mucons membrane, which he describes as not benefited by any remedies which he has been able to devise, except change of air.



nervous influence, is a necessary pathological inference, adopting, as we do, our views of functional disorder as general with respect to the nervous system;\* and it is to this description of cases, perhaps solely, that galvanism, as suggested by Dr. W. Philip, is applicable. Of the advantages resulting from a very slight modification of the usual treatment, many instances have occurred to us.

XXVII. A young lady, of an asthmatic constitution, and whose habit was so susceptible that town air or a close room instantly occasioned dyspnœa with piping respiration, caught a severe cold, and was in consequence attacked with a violent paroxysm, attended with considerable fever. She was found with purple cheeks and lips, supported in the bed by pillows; the chest heaving; the muscles of respiration tense and labouring; the pulse was 120, small and compressible. On examination, slight tenderness was discovered at the two or three upper cervical vertebræ. Together with other remedies usual in asthmatic cases, a blister was applied to the neck, much to the surprise of the patient, who had been always before blistered on the chest. Perfect relief to all the symptoms, but especially the oppression, was obtained, and the paroxysm on the next night was scarce observable.

In a few weeks afterwards she had a return of the fit in a more violent degree, and applied two large blisters in succession to the chest, at her own counsel, without the slightest benefit. Her medical attendant was now sent for, and found her, if possible, in a much worse state than on the former occasion. A blister was again applied to the neck, and a mild diaphoretic mixture, with Hyosciamus, ordered. Though not effecting so complete a resolution of the paroxysm as in that instance, it produced a surprising mitigation of the disorder. The young lady and her friends were particularly struck with the obvious relief which the remedy procured.

It must be evident that leeching, blistering, or friction with liniments at the origin of the nerves, can only be of use in the special instance of nervous disturbance, and perhaps we might say generally, only where spinal tenderness is to be met with. The following are cases of irritation, where the oppression and cough were merely symptomatic of the general affection.

\* We feel particular pleasure in referring to a very interesting chapter in the work of Laennec, on nervous and spasmodic asthma. It places the question of the dependence of a class of asthmatic cases on mere nervous disturbance beyond all dispute.

**XXVIII.** Kate C—, aged fifty-six, was ill three weeks with violent oppression, which usually seized her at night, after retiring to bed, and obliged her to sit up. It always commenced by a sensation as if cold water trickled down the crown of the head, and then palpitation of the heart supervened, with violent dyspnœa, and a feeling as if she was about to die. The fit, after continuing from half an hour to an hour, terminated by general perspiration and debility. She had no cough or expectoration, and the oppression was seldom distressing until night. There was great tenderness of all the cervical vertebræ, and of the five or six upper dorsal. Pressure at the sixth occasioned pain under the right breast.

**XXIX.** Ann Fitzgerald, aged thirty, a nurse, complained of hard, dry cough, with oppression; pain in the right eye and brow, aggravated much on coughing; general soreness of the scalp; pulse natural, tongue whitish. Her illness followed a severe cold, attended by inflamed tonsils and pain of chest. On examination, there was found great tenderness of all the cervical and the sixth or seventh dorsal vertebræ.

**XXX.** Catherine M'Mahon, aged fifty, complained of pain in the head, followed by a pustular eruption. The right side of the head was first affected, and afterwards the left in the same way. She had pain in the cardiac region, increased on inspiration, and attended by hard cough and oppression; the stomach was dyspeptic, and there was occasional vomiting. She felt no pain in the back, except on examination. Pressure at the first and second cervical vertebræ excited pain in the brow; at the eighth or ninth dorsal, severely in the stomach, with tendency to syncope; pressure at the last cervical or upper dorsal brought on the coughing, and took away the breath.

**XXXI.** Bridget Connel, aged forty-five, complained of pain and soreness at the pit of the stomach and right side, beneath the margin of the ribs, increased severely by pressure on the eighth dorsal vertebra; had fluttering at the heart, with great debility, and almost constant dyspnœa; obliged to sit up in the bed at night, in consequence of the oppression. Had pain across the brows and general soreness of the scalp, with thirst and loss of appetite; tongue little furred. Pressure behind the mastoid process brought on the pain at the brow, and there was considerable tenderness of the lower cervical vertebræ.

All these cases recovered. We have thought it unne-

cessary to occupy the reader's time with the treatment, as it is a subject upon which we shall hereafter dwell more particularly. It was necessarily modified by the variation in the symptoms, but was, through all of them, governed by the state of the spinal cord. Much as the symptoms seemed sometimes to indicate inflammatory action, bleeding was never resorted to, except with the view of allaying irritation, or relieving congestion, and then but to a small extent. It is remarkable how very often the stomach, and sometimes the liver, seem to be engaged in these cases, as in xxx. and xxxi. When it is recollected that these viscera are supplied by the same nerve which is distributed to the lungs, there seems little occasion to refer the connexion to any general sympathy, and we find a ready explanation of the fact adverted to by many medical writers, of the frequency with which the asthmatic paroxysm is occasioned by disordered stomach.

A very important fact, ascertained by Magendie and Desmoulins, is the constant correspondence between the action of the posterior portion of the fourth ventricle and the eighth pair. It is to this, perhaps, we are to refer the oppression and general affection of the respiratory system, which, in the commencement of apoplectic or paralytic attacks, we have sometimes seen mistaken for symptoms of hydrothorax. To this also we may attribute the occurrence of that very common affection, spasmodic croup, and one which has been said equally to resemble croup, described by Drs. Hamilton and Clarke, and which to us appears but a variety of the former.

That spasmodic croup is in most instances dependent either on irritation at the origin of the eighth pair, or at some part of the fourth ventricle, we need scarcely offer further proof than the frequency of its occurrence as a symptom of spinal irritation in adults. It is mentioned as one of that long train of affections under which the lady, whose case is first detailed in these papers, suffered, and shall be often noticed in others similarly complicated, as we proceed. It occurs sometimes like acute croup, with wheezing, as if from phlegm in the trachea, and stridulous respiration; sometimes with a peculiar crowing inspiration, as in the convulsive attack first described by Dr. Hamilton, of which we shall have to speak presently; and in these cases it is often combined with difficulty of swallowing, strongly marking its cerebral or spinal dependence. It is sometimes accompanied by feverishness, especially in children, in which case it is apt to be mistaken for true inflammatory

croup; and it is generally induced by distant irritations, as teething or disordered bowels, or the accession of measles in certain unfavorable states of the atmosphere.

Three cases of this affection, occurring within a few days on the accession of measles, lately occurred to us, which sufficiently establish the foregoing views. In one, bleeding and vomiting was made use of, with immediate and perfect relief. As it was the first which occurred, and measles was not suspected at the time, it was supposed to be a case of true inflammatory croup. The occurrence of measles, however, on the next day, suggested its dependence on irritation: and the second little patient, who was quite as seriously attacked, was left to the warm bath, the action of an emetic, and calomel, which gave relief in the course of a few hours. In the third case, nothing was done, through some neglect on the part of the mother; but the child was nevertheless relieved in the morning by the eruption of the measles. What yet further proves the nature of these affections is, that, in the second case, after the infant had struggled through a severe and protracted disease, there was a recurrence of the croup, in as violent a degree as before. It was relieved by the same remedies, by blistering the neck, and by antispasmodics, and the child, though extremely exhausted, seemed likely to recover. It then, however, fell into frequent dozing; its eyelids were unclosed while asleep, and it was continually sawing the air with whichever arm chanced to lie out unconfined by the bedclothes. There was occasional grinding of the teeth, and other symptoms of an affection of the brain; the skin and feet were cold, and the face pallid. He remained in this state for a day or two, fell into convulsions, and died. There was no croupy breathing for the last few days. It would appear very probable that all these symptoms were rather the effect of exhaustion than of organic disease of the brain; but there was no examination permitted.

In so freely assuming the existence of spasmodic croup as a distinct disease from the inflammatory, it may perhaps be necessary to offer some remarks on the opinion of one who is justly esteemed of very high authority on this subject, Dr. Cheyne. He asserts that he has not been able to see any just grounds for considering that there are two kinds of croup, and that, from the identity of symptoms in what have been called the spurious and the inflammatory, he conceives them to be but varieties of the same complaint.

The pathological principles on which all our reasonings

respecting functional disorders are founded, would, we think, without any reference to the immediate cases under consideration, lead to very opposite inferences: the functions of every organ in the body may be disturbed, as we have often insisted on, in three different ways; by inflammation immediately affecting any particular one, by irritation of the capillary extremities of the nerves distributed to it, by irritation at the trunk or origin of these nerves; and so like shall be the disturbance, so similar the symptoms in each of these cases, that sometimes no trace of distinction can be detected. Thus, ischuria may be occasioned by inflammation at the neck of the bladder, by the irritation of a stone within it, by irritation of the spinal cord at the origin of the lumbar nerves. Pain of the stomach or bowels may be occasioned by inflammation, by irritants acting on the minute nervous fibrils, or by irritation of the cord at the origin of some of the dorsal nerves; and in these latter cases the symptoms occasioned by mere irritation may be attended with heat of skin and quickness of pulse, as in the inflammatory. From all fair analogy, therefore, we must believe that the trachea may be affected with inflammation, (the inflammatory croup of authors;) with irritation, as from mephitic and irritating vapours acting immediately on the parts; and with irritation of the cord affecting the origins of the cervical and pneumogastric nerves: and that in all these the symptoms shall be precisely alike, as far as regards disturbance of function: they shall all be cases of croup, though arising from such different causes. So clear do these inferences appear to us, that, if the spurious or spasmodic croup was at this moment an unknown disease, we should unhesitatingly predict the probability of its occurrence.\*

[To be continued.]

\* Little as the attention of the medical world seems to have been directed to the law just referred to, proofs of its universality are to be found in the history of the diseases of every organ of the human frame. Thus, as we have spurious croup, a mimic of the inflammatory, we have an affection of the larynx presenting a likeness of laryngitis, or of ulcerated larynx. Dr. G. Gregory mentions (*Elements of the Theory and Practice of Physic*,) that, "in the progress of consumption, particularly towards its latter stages, it is not unusual to find a violent pain come on, referred to the larynx, and attended generally with hoarseness. From the violence of the pain, it might be supposed owing to inflammation; but leeches and blisters are of no service, and it generally goes off in four or five days. It is probably a symptomatic pain, connected perhaps with the recurrent nerve."

## BELLADONNA.

*On the employment of Belladonna in Cases of Frontal Neuralgia.* By J. CLARET.

It is known that the ancients were aware of the stupifying and narcotic action of belladonna, and that they employed it to relieve excessive pain and to procure sleep. Modern practitioners attribute to it the same properties, but use it in a greater variety of maladies. It is now employed to dilate the pupil previous to the operation for cataract; to diminish inflammation of the iris, and those ophthalmies which are kept up by excessive sensibility of the nerves which are distributed to the globe of the eye; as a remedy for whooping cough; and to facilitate the dilatation of the cervix uteri, when its rigidity prevents the issue of the fœtus, or impedes those manual operations which are requisite for its extraction; and lastly, in very diminished doses, as a preservative from measles or scarlet fever.\* In 1826, Mr. HENRY, an English military surgeon, pointed out the efficacy of the extract of belladonna in cases of frontal neuralgia. Since that period, M. CLARET has frequently employed it, with the greatest success, in frontal tic douloureux: he considers it, indeed, a specific in such cases. In the course of two years, he has treated five cases with this remedy, and completely cured them. Encouraged by his success, he tried the belladonna in other neuralgic affections; in sciatica, for example, but without any benefit. He attributes the failure of the remedy in such cases to the difficulty of acting upon the deep-seated nerve which is affected. In gastralgia and odontalgia, he has also procured temporary relief from frictions with the belladonna.

The following cases are related to show the dependence that may be placed on the treatment recommended:

CASE I. Madame A., æt. twenty-four, of a very nervous temperament, complained of slight pain in the left eyebrow, for which no cause could be assigned. The severity of the pain gradually increased; it became very acute, and extended to the forehead, the vertex, and the globe of the eye: she was also tormented by a sensation of spasmodic contraction in the epigastrium: her pulse was small and frequent; urgent thirst. The attack of pain occurred each morning at about seven o'clock, and continued with more or less violence till four or five in the afternoon: it then

\* London Medical and Physical Journal, Jan. 1828, p. 67.

ceased, leaving a feeling of heaviness in the head, and did not again come on until the next day, at the same hour. The occurrence of six regular and uniform paroxysms of pain clearly indicated the case to be one of periodical frontal neuralgia. Ten grains of extract of belladonna, mixed with water so as to render it about the consistence of pomatum, were rubbed in upon the part. The first failed from the imperfect application of the remedy. The second almost instantly diminished the sufferings of the patient, and in three hours the pain was entirely removed. Some weakness of sight was caused by the action of the belladonna upon the retina. The remedy was applied four times in all, and the pain did not return. The health of the patient was completely restored, and her vision was unaffected.

**CASE II.** A physician was attacked with the same disease. The pain was at first attributed to irritation of the membrane lining the frontal sinuses, as he had previously laboured under severe catarrh. Fumigations and other local applications were tried in vain. The attacks of pain were periodical and severe. Two frictions effected a cure.

**CASE III.** A woman, æt. thirty-eight, at first complained of a dull pain in the left eyebrow. It quickly became very severe, and extended to the globe of the eye and top of the head, resembling in some degree the *clavus hystericus*. The pain usually began about ten or eleven o'clock in the morning, and continued until evening, accompanied by so much distress and suffering in the head that she was unable to attend to any occupation, and was obliged to remain in bed. During the night the pain ceased, and returned the following day nearly at the same hour, continuing its periodic type with great regularity. Eight attacks of this kind had been borne before any medical advice was sought for. Her sufferings at length became insupportable, and she consulted M. Claret. The same remedy was rubbed in on the affected part, and in a few moments the pain disappeared.

**CASE IV.** A poor woman, forty-five years of age, of a very nervous and irritable temperament, had been subject to occasional attacks of headach. A fixed and violent pain on the left eyebrow next came on, and her sufferings were almost insupportable. M. C. found her rolling with agony on her bed, shrieking in a dreadful manner, and unable to rest her head for a single moment. Her pulse was quick, small, and hard; stomach irritable, and would bear no

food; extremities cold, and the acute and continued pain caused a tremor over the whole body. She had suffered for four days. The attack commenced about eight o'clock in the morning, subsided towards evening, and returned the next day at the same hour. The belladonna friction was instantly applied. The effect was quick: the pain was soon relieved; and a second friction entirely restored the health of the patient.

Some time afterwards, this woman had another attack, but not so severe as the former. Without any medical advice, she procured the extract of belladonna from a chemist, and cured herself by two applications of it.

CASE V. A woman had received a blow on the head, after which she was tormented with severe pain in the eyebrows, forehead, and temples. It was apprehended that some organic mischief had been produced in the brain; but the periodical returns of her sufferings induced M. Claret to consider the symptoms to be merely neuralgic. The extract of belladonna was applied in the same manner, and three frictions restored the patient to health and ease.

In the sixth and last case, the patient was relieved by the same means, after a violent blow on the temple. She afterwards suffered a relapse, and from the symptoms it was evident that the brain had suffered some organic injury.

M. Claret remarks in conclusion, that he considers the extract of belladonna, employed in the above manner, a specific in such cases as those which he has related. His object has been not to speculate as to the *modus agendi* of the remedy, but to state a practical fact of much importance. The treatment recommended by M. Claret is well known, and frequently employed in this country; but we have seen cases of continued suffering from neuralgic affections of the face, and other parts of the body, both in public and private practice, which have resisted various modes of treatment, and in which the external application of the belladonna was not tried. The above satisfactory cases will, no doubt, direct the attention of every practitioner to this mode of treatment.\*

\* *Revue Medicale.*



## HOSPITAL REPORTS.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

*Report of some of the Cases treated at this Hospital.*

Surgeon, G. J. GUTHRIE, F.R.S.

*Rheumatic Inflammation of the Sclerotic, with Iritis.**Efficacy of Turpentine.*

DECEMBER 24th, 1829.—Mary Mallison, æt. thirty-five, a single person, of rather plethoric habit, living as cook in a family, was attacked with rheumatism of the knees and shoulders three months since, but, by the aid of medicine, perfectly recovered. She was enjoying perfect health, when, twelve days since, she was exposed to the night air and thick fog, and the same evening complained of pain and dimness of the left eye, which in the course of a few hours became red, and discharged tears. The right eye was slightly affected; and they both continued bad for seven days, the left being the worse. No application but warm water. On the fourth morning the left was better, and the right became the more affected one, and has continued worse than the left since. She applied three leeches to the right eye, and one to the left, and remained rather better till the ninth evening, when the leeches were reapplied without much benefit. During her illness she has suffered from violent pain in her head, generally worse towards evening; and, for the last few mornings, she has complained of “dreadfully shooting pains through the ball of the right eye, lasting sometimes for two hours.”

She is able to bear the light for a short time; does not suffer from much lachrymation, and has no secretion in a morning. The right eye is considerably inflamed; a zone of pink vessels running in straight lines around the cornea, leaving a white line between them and the latter tunic. There are some large tortuous vessels of the conjunctiva, but the inflammation is chiefly of the sclerotic. Cornea clear; aqueous humor turbid; iris oval, of a brownish colour; sight excessively dim; pains in the forehead and eyeball violent towards the evening and early in the morning; furred tongue; confined bowels; pulse 110, strong.—R. Antimon. Tart. gr. iv.; Aq. puræ ℥iss. fiat haustus st. sumendus.—R. Sp. Tereb. zi. in formâ misturæ post horas quatuor, et rep. quartis horis.—R. Pulv. Ipecac. co. gr. x. horâ somni sumend.

Dec. 25th.—The draught speedily produced vomiting, which lasted for some time. Bowels most fully acted on; and the surface of the body in a state of profuse perspiration. Took the turpentine at five o'clock, and the powder at bedtime. Passed a good night, and has been free from pain in the head; but has suffered from “throbbing, or rather a burning, in the ball of the eye.” Still a good deal of cloudiness; vessels less pink; sight

the same; pulse reduced. Has suffered no inconvenience from the turpentine.—Pers. in usu medicament.; i. e. Sp. Tereb. et P. Ipec. co.

27th.—Suffered from severe darting pains through the head and eye, during the night. This morning is relieved, and finds her sight stronger. Pupil more regular; less injection of the sclerotic. Complains of pain and heat in the parts when the urine is voided. Tongue cleaner; bowels open. Forgot to take her powder.—Rep. pulv. et mistura.

28th.—Suffered for three hours this morning with violent pain. Iris more irregular; vessels of the conjunctiva more vascular.—Empl. Belladon. tempori. Rep. med.

30th.—Went into the country yesterday, finding herself much better. Experienced great relief from the belladonna. Has had no return of pain in the head. Has slept well without the powder. Bowels open; still suffers pain when making water. Pupil dilated and more regular. Still has dimness, and a congested state of the conjunctiva.

January 1st.—Has omitted her medicine these two days. Passed a most restless night. Pain in the head returned with violence; conjunctiva more inflamed, constant lachrymation; some intolerance of light; pupil irregular. Fancies she has caught cold.—Rep. mist., pulv., et empl. Belladon.

3d.—Has taken her turpentine every four hours. Bowels gently acted on. No strangury. Has taken her powder at bedtime. No return of pain. Says she is now greatly better than she ever has been since admission; can see considerably better; no lachrymation or intolerance; pupil more regular, conjunctiva less injected.—Repet. medic.

6th.—Had no medicine yesterday. Good night, free from pain. Can see equally well with both eyes; vessels resumed their natural appearance. Considers herself perfectly well. Passes her water without difficulty.—Desired to omit her medicine, and repeat it in two days' time.

9th.—No return of pain, and follows her business as usual.

Called at the hospital a week after, to inform us she was perfectly well.

Although this case was decidedly benefited by the turpentine, and indeed ultimately cured by it, yet it is most probable that, in the first instance, its effects were very much increased by the powerful dose of antimony. The turpentine affected the urethra on the second day, when the eye also was much benefited. She neglected its use, was worse, and repeated her medicine with greater relief than before, without its having any effect on the urinary organs; but, as she was suffering from the catamenia at this period, the turpentine continued to keep up a discharge from the uterus for some days. The bowels were very little acted on by the medicine. The quantity of urine secreted as usual, but depositing considerable sediment.

As an addition to the list of medicinal agents in the cure of several affections of the eye, (more particularly syphilitic iritis,) turpentine is likely to prove a very useful and valuable one; but in the present case it is probable that equally good effects might have been accomplished by a less severe remedy, for the patient appeared much reduced by the effects of the medicine.

*Syphilitic Iritis.*

Thomas Harper, æt. nineteen; admitted February 9th, 1830. About twelve months since, caught the venereal disease for the first time; had a chancre; applied the black wash, and took pills, which he says did not make his mouth sore. An eruption appeared on his body about two months after the chancre healed: for this he took some medicine which made his mouth sore, and which he thought cured him, as the disease in great measure disappeared. Five months since had gonorrhœa, but was soon cured, and continued well till six weeks since, when his right eye became rather dim and very painful. This continued for a few days, when the pain disappeared; but it returned about two days since, as violent as before, with increased dimness, amounting almost to total blindness. In this state he was admitted this morning: iris of the right eye irregular, contracted, and almost stationary, with discoloured surface.—Gutt. Belladon. R. Pulv. Jalap. co. zi. cras mane. R. Sp. Terebinth. zi. ter die.

11th.—Pupil more regular; colour of the iris improved, as also vision.—Rep. med.

13th.—Going on well.

17th.—The eye has continued gradually to improve; irregularity of iris nearly gone. Has passed blood from the urethra.—Ordered to discontinue the medicine. R. Pil. Hydrarg. gr. v. h. s. Sulph. Magnes. ʒi. mane.

19th.—Convalescent. Makes water well.—Ordered to return to his medicine.

23d.—The lad is quite well. The eruption has disappeared; vision perfect; eye resumed its natural appearance.

LONDON HOSPITAL.

*Ossification of the left Auriculo-ventricular Valves, after repeated Attacks of Rheumatic Gout.*

JOHN JONES, æt. twenty-two, of a spare habit and sanguineous temperament, with a pale countenance and projecting sternum, commonly denominated chicken-breasted, was admitted into the hospital on the 17th October, under the care of Dr. BILLING. He states that he has at different periods been attacked with rheumatic gout, both in the upper and lower extremities; and that about fifteen months ago he was entirely deprived of the use of his limbs for a fortnight. He suffered much about five months ago

with dyspnœa, attended by a slight cough, and with palpitations at the heart, which have increased much within the last three months, and are always aggravated by the least motion. On applying the ear to the parietes of the chest, over the left side of the heart, the bellows sound is distinctly heard, and an impulse is communicated to the head of the observer. Pulse at the wrist ninety-six, and small; appetite good; much thirst; night sweats. Bowels relieved four or five times daily; urine free and clear.—V.S. ad 3xvi. Vesic. reg. cordis.

He bore the bleeding well. Breathing is easier; palpitations not so frequent, and the bellows sound is less noisy. Pulse eighty-four.—Infus. Gent. comp. ter die.—Cal. c. Rheo. ʒi. alt. aur.

20th.—Sleeps well, and continues improving.—Contin. med.

24th.—Cough has increased since the 20th.—Infric. Ung. Ant. Tart. reg. cordis. Cont. med.

27th.—The ointment has produced an eruption. Cough very troublesome, and prevents his sleeping; countenance very pale. The bellows sound continues, and a double pulsation is now felt at the wrist.—Pule. Opii gr. i. ter die. Ol. Ricini omni mane si opus sit. Rept. Ung. Ant. Tart. Omitt. alia med.

31st.—Orthopnœa, chiefly at night; cough more severe.

November 3d.—Is now very much distressed by the great difficulty of breathing.—Setaceum reg. cordis.

7th.—Incessant vomiting came on yesterday, which was in some degree relieved by a dose of the Tinctura Opii.

8th.—He died last night at twelve o'clock.

*Post-mortem examination.* Thorax: The pleura costalis was found adhering to the pleura pulmonalis, and in some places the adhesions were exceedingly firm. The pericardium adhered throughout to the surface of the heart. The right auricle was healthy; the right ventricle was a little hypertrophied, and the internal coat of the pulmonary artery was very red.

The left auricle was considerably hypertrophied; the left auriculo-ventricular valves were so much ossified as to leave a small fissure, into which the point only of the dissecting scalpel could be introduced. The left ventricle was slightly hypertrophied, and the ostium of the aorta, as also its thoracic portion, appeared of a less caliber than natural. The lungs were much congested.

Abdomen: A little fluid was found in the abdomen; the liver was enlarged, and gorged with blood. The other viscera were healthy.

Head was not examined.

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*Disease of the Heart after Rheumatism.*

JOSEPH HOWARD, æt. forty, a weaver, emaciated, countenance of a leaden hue, and expressing great anxiety, was admitted on the 4th of February, under the care of Dr. BILLING. He reports

that he had been the subject of rheumatism about fourteen months ago, and that his present illness came on about ten months ago, with severe pain in the left side of the chest, after lifting a heavy weight: he obtained relief by being repeatedly cupped, and by taking mercurial pills until ptyalism was produced.

He now complains of dyspnoea, which is much increased by motion; of pain, and a feeling of tension in the region of the heart, and of some tenderness on pressure; and of a great tendency to syncope after fits of coughing, which are very violent, and attended by a slight mucous expectoration. The ronchus sonorus gravis and mucosus are heard on both sides of the chest; the respiration is puerile on the right side, and indistinct on the left; percussion gives a duller sound on the left side than on the right; and the left side is found to give half an inch more than the right, on measuring from the spine of the vertebra to the xyphoid cartilage. The heart's pulsation is felt over a considerable extent of the anterior thoracic parietes, and the bellows sound is heard on applying the stethoscope over the situation of the left side of the heart. Decubitus always on the left side. Pulse 120, hard and irregular.—V.S. ad 3xvi. statim. Mist.\* Ant. Tart. ʒss. om. horâ. Milk diet.

5th.—He feels a little better to-day. Had one very copious loose motion, and was sick in the night; nausea is produced by the medicine. Cough not so troublesome; respiration the same as yesterday, but with less ronchus; heart's action continues the same; pulse 120, hard, and weaker than yesterday.—Omittr. medicamenta. Tinct. Digit. ʒss. ter die, ex Infus. Gent. comp. Vesic. lateri dolente. Middle diet and rice pudding.

9th.—Less pain of side; cough very troublesome; dyspnoea is now increased to orthopnoea: lips somewhat livid; great faintness, and he feels very chilly; respiration laborious, and about sixty in a minute; action of the heart the same; pulse 120, stronger, and vibrating; bowels free; no appetite.—Hirudines xx. reg. cordis. Omittr. Tinct. Digit. Liq. Hydrarg. Oxym. ʒij. omni horâ. Liq. Opii Sed. gtt. xxx. h. s.

10th.—Experienced some benefit from the application of the leeches, but, in consequence of the pain still continuing, sixteen were again applied in the evening, which relieved him entirely. Has coughed only three times since yesterday evening. The respiration is now tranquil, and twenty in a minute; can now lie down in bed, and continues on the left side. The respiratory murmur is still puerile on the right side, and indistinct on the left, and without any ronchus; the bellows sound is now clearer; pulse 108 and soft; bowels free; tongue white.

11th.—Did not sleep well last night. Cough more troublesome and dyspnoea greater than yesterday; tongue coated; bowels once relieved this morning; pulse 120, very hard and vibrating; face

\* Half an ounce of the mixture contains one fourth of a grain of Ant. Tart.

appears more bloated and livid. The medicine produces nausea, but not vomiting. He feels so weak as not to be able to sit up in bed.—Omittr. Liq. Hydrarg. Oxymur. Inflic. cruribus Ungt. Hydrarg.

12th.—Is free from pain to-day; feels faint and low; pulse 120, weak, but jerking; respiration still hurried; the lips are less livid; skin temperate and soft; tongue white and more furred; anorexia; very little expectoration. Yesterday, when the breathing became much oppressed, and the lips very livid, twelve leeches were applied to the scrobiculus cordis, and he took Tinct. Digit. ʒi.; Tinct. Hyosciam. ʒij.; Tinct. Camph. comp. ʒij. ex aqua. Tinct. Digit. ʒss. ex Aqua Menth. ter die. Low diet; beef-tea, table beer.

13th.—Slept very comfortably last night, and continues much the same as yesterday. In the evening he had ʒiiss. of port wine, on account of the constant nausea.

14th.—The digitalis having produced its depressing effect in a great degree, with constant nausea and anorexia, pulse eighty-eight, and respiration fifteen, it was left off. In consequence of the soreness of the gums and throat, let the Ung. Hydrarg. be discontinued.—Acid. Hydrocyan. ʒiij. ex Aqua Cinnam. ter die.

16th.—Yesterday the hydrocyanic acid produced sickness, which was relieved by three doses of the effervescent mixture, with ten minims of the Tinctura Opii in each. The first dose of the acid produced sickness to-day. He slept better last night, and feels easier to-day. Pulse 108, regular, and much softer; lips less livid; gums still sore; respiration about thirty; bowels free; tongue clean.—Acid. Hydrocyani ʒiij.; Quinæ Sulph. gr. i. ex Infus. Rosæ ter die.

19th.—Has been improving during the last two days. Pulse 108 and full; appetite better; bowels free.—Elaterii gr. ss. alt. auroris. Cont. cætera.

23d.—Feels rather stronger to-day than he did yesterday; decubitus still on the left side; there is considerable fulness in the epigastric region. Pulse 120, full. Each dose of the Elaterium produces eight or ten motions.—Hirudines viij. scrob. cordis alt. auroris. Omit. Elaterium.

26th.—Eyelids becoming anasarcaous. Breathing rather freer; cough less; appetite better; tongue furred; thirst; bowels open; urine high-coloured and scanty; pulse 108, strong and throbbing.—V.S. ad ʒxij. Pil. Hydrarg. gr. v. ter die. Omit. cætera.

27th.—The blood extracted yesterday was both buffed and cupped. He slept rather better during the night, but is much the same as yesterday: less anasarca of the face; pulse 120 and softer; respiration is still puerile on the right side; urine increased in quantity. To-day, by means of the stethoscope, pectoriloquy has been discovered at the superior spinal fossa of the scapula.—Cont. Pil.\*

## ST. THOMAS'S HOSPITAL.

*Retention of Urine from Stricture. Local application of Belladonna.*

JOHN SCHAAFF, æt. sixty-one, a native of Saxony, residing in London, and where, for the last thirty years, he has been employed as a coppersmith and brazier, was admitted into Isaac's ward with retention of urine. His health has been generally pretty good; occasionally, however, he has been affected by colic. Has had stricture in the urethra for two years, and has been obliged at times to apply to a medical man, for the purpose of having his urine drawn off by a catheter.

The man came to the hospital about three o'clock on Sunday morning (February 24th), when the dresser found it impossible to introduce a catheter into the bladder, some blood following every attempt. After some time, however, he succeeded in passing a small-sized conical bougie, and some urine flowed, which greatly relieved the patient. The man refused to have any thing more done for him at that time, and he returned home to his bed.

At ten A.M. of the same day he returned, labouring under the like distress as at his first application. After some trouble a bougie was passed into the bladder, and a few ounces of urine followed on its being withdrawn. The stricture is situated about three inches from the orifice of the urethra. The man was now put into the warm bath, and a dose of castor oil given him. Mr. TYRELL ordered him to take Tinct. Ferri Muriat.  $\mathfrak{m}\mathfrak{x}\mathfrak{v}$ .; Tinct. Opii  $\mathfrak{m}\mathfrak{v}$ . secundis horis. A bougie, rubbed over with Belladonna and oil, to be passed into the urethra. Soon after the man came from the bath, this was tried, and after two or three attempts the bougie (which was larger than those used before) readily passed the stricture, and the bladder was emptied of its contents. Poppy fomentation to be applied to the lower part of the abdomen and penis. About an hour after, another bougie was passed, and kept in the urethra two hours.

On the following day a bougie (conical pointed) was introduced two or three times, by which the stricture was sufficiently dilated to allow the urine to pass pretty freely.

The man was allowed to remain without any further regard to the stricture for a few days, for the purpose of allaying a considerable tumefaction of the penis; and on this subsiding, a bougie, simply oiled, could not be introduced beyond the stricture, and Belladonna was again resorted to, by which the irritability of the stricture seemed to be allayed, and the bougie passed into the bladder.

The patient now passes his urine whenever he feels a desire, and the present treatment adopted is merely attending to the secretions of the alimentary canal, and the introduction of a bougie daily.\*

\* Ibid.

## HOTEL DIEU.

*Luxation of the Ulna backwards, with a Wound of the Elbow-joint: Hemorrhage: Cure.* By M. BOUDAULT.

THE radius and ulna are so securely united, that it was long doubted whether either of these bones could be displaced without the other. DUVERNEY first described dislocation of the radius. SIR ASTLEY COOPER is the only writer who mentions dislocations of the ulna alone; and he has given an engraving of this injury.\* Cases of this kind must, therefore, be extremely rare.

François Alexis fell from a balcony upon the palm of his left hand. The arm supported the whole weight of the body, while the external part of the forearm, precisely at the part which corresponds to the coronoid process, and the superior extremity of the ulna, was seriously bruised and driven backwards by a large stone which accidentally lay where he fell. When he recovered from the faintness which was the first effect of the accident, severe hemorrhage took place from the wound. A surgeon attempted in vain to stop the bleeding, and he was taken to the hospital.

His face was pale and covered with sweat, and he had every appearance of having lost a considerable quantity of blood. The hand and forearm were in a state of flexion. On the external part of the elbow-joint was a wound, from eighteen to twenty lines in extent. Between the lips of the wound were observed shreds of ligaments and lacerated muscles. The trochlear surface of the humerus was seen smooth and polished. The olecranon was also distinctly seen and felt, elevating the skin and forming a considerable projection. Externally, the articulation presented no remarkable appearance. The radius was not displaced. In fact, while with one hand the arm was rotated, and the index finger of the other hand introduced into the wound, it was evident that the radius was in its natural situation, and in contact with the humerus. The patient was carefully examined by M. PAGES, as well as M. BOUDAULT, and there could be no doubt that the dislocation was of the ulna alone.

Reduction was easily effected by the same means that would be adopted for luxation of both the radius and ulna. The lacerated muscles were replaced as neatly as possible within the wound,

\* Sir Astley Cooper, too, is the only author who has described, from personal experience, five species of luxations of the elbow, among which is that of the ulna backwards. Sir Astley mentions, 1, dislocation of the radius and ulna backwards; 2, of both these bones laterally; 3, of the ulna alone; 4, of the radius alone forwards; 5, of the radius backwards. No surgical library can be complete without Sir Astley's work on Dislocations. To country practitioners especially, who frequently cannot obtain a surgical opinion without considerable delay, it must prove invaluable for reference.



which was allowed to unite by the first intention, in order to prevent the admission of air within the joint. The hemorrhage was arrested by light compresses, and simple dressing applied. The limb was then placed in a state of semiflexion upon a pillow. Low diet. Such were the means employed for this severe accident. The quantity of blood which had been lost rendered venesection unnecessary, in the opinion of the surgeons.

The next day the patient was calm. Pain not very severe, but, as the pulse had risen, he was bled to prevent inflammation, which was so much to be feared.

During the ensuing four days, no remarkable symptom occurred. The limb was neither tense nor swollen; tranquil sleep; the joint free from pain.—Soup was allowed.

The fifth day, when the dressings were removed, the lint was found covered with blood, but the wound presented a healthy appearance, and was rapidly healing. Fresh bandages and simple dressings were applied.

From this time the patient went on well, and in less than a month from his admission he left the hospital. A roller was applied round the arm, and the man was cautioned to be very careful of the limb. He promised to return if any new symptoms arose; but, as he did not make his appearance, it was presumed that the case terminated well.

This case, in which there was so much general disturbance from the accident; a wound penetrating the elbow-joint, excessive hemorrhage, and, above all, luxation of the ulna backwards, proves that a cure may sometimes be effected even in the severest accidents, in as short a time as when only a simple wound has been inflicted. The abundant hemorrhage, the immediate reduction of the dislocation, and the subsequent venesection, no doubt prevented those inflammatory symptoms which in similar cases so frequently run on to the destruction of the patient. The constitution of the patient, too, was very favorable for his recovery.\*

\* *Revue Méd.* Janv. 1830.

## CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim  
 illa, prius, cretâ; mox hæc, carbone, notamus.—PERRINUS.

*Illustrations of some of the principal Diseases of the Ovaria, their Symptoms and Treatment; to which are prefixed, Observations on the Structure and Functions of these Parts in the Human Being and in Animals.* By EDW. J. SEYMOUR, M.D., Fellow of the Royal College of Physicians of London, and one of the Physicians to St. George's Hospital. *With 14 Lithographic Engravings.*—8vo. pp. 126. London: Longman and Co. 1830.

ALTHOUGH many interesting facts have been ascertained respecting the structure and functions of the ovaria, we are as yet but infants in our knowledge of the nature of the various diseases to which these important organs are liable. To determine the existence of ovarian disease in its incipient stages is generally difficult, and sometimes impossible. When the malady is more fully developed, the difficulty of the diagnosis may perhaps be removed; but unfortunately our present means offer us but scanty hopes of eradicating it at an advanced period of its duration. We detect the enemy when we are no longer capable of presenting effectual opposition to his still further and fatal progress. Much, then, remains to be done before the subject to which Dr. SEYMOUR especially directs our attention will be exhausted of its interest. The records of medicine bear ample testimony to the zeal with which it has been investigated; and in the present day there is too much ardour and humanity in our profession to stop short in an inquiry of such vast importance. The object of the work before us is to lay before the reader the principal part of what is known in the history of ovarian diseases, the appearances presented on dissection, the remedies which have been proposed for the entire cure, and the palliative means which diminish the sufferings of the patients, and render life endurable.

In the first chapter, Dr. Seymour traces the outline of the functions of the ovaria in the various classes of animals, especially the vertebrated animals; as in many instances what is obscure, or altogether unknown, in one class, is rendered more clear by the more simple contrivance or more visible structure adapted for similar purposes in

another.\* That physiology should be considered the basis of all true pathology, we are quite convinced; and we are gratified to find that Dr. Seymour considers "it is hopeless to expect that any considerable improvement should be made in the treatment of the various and complicated diseases of the ovaria in the human being, unless the structure and functions of these parts are fully understood; and that, without this knowledge, we shall be forced to resign to their fate the unfortunate victims of these unsightly and often painful diseases, with a sigh for the insufficiency of our art." It is not asserted that even when these laws and these structures are clearly defined, much will not be left to be effected in the treatment of ovarian diseases, much to be referred to individual constitution, to the artificial laws which regulate civilized society; more to be hoped for from the discovery of new remedies, or the application of those already known, by ingenuity and talents.

We shall confine ourselves, in our notice of the first chapter, to the chief conclusions Dr. Seymour draws from his own observations, and the assistance he has derived from his researches as to the structure and functions of the ovaria in animals and the human female.

"In the class of birds,\* the ovarium consists of a number of rounded or oval bags, each attached by a peduncle to a common stalk, and termed, from their contents, the yolk or yelk bags. It is placed immediately above the kidneys, at the bifurcation of the aorta. It is enclosed in peritoneum, which connects it with the spine. Immediately below opens a tube similar in appearance to an intestine enveloped in peritoneum, which fixes it to the spine, and likewise restrains its mobility. This tube is the oviduct: the extremity near the ovarium is free in the abdomen, is of great tenuity and transparency, and has received the name of infundibulum. As the duct descends it becomes thicker, and towards the inferior part a few muscular fibres are visible. The interior of this tube is covered with villi, from which is secreted first the white, and afterwards, at the inferior parts, the shell. These villi do not apparently differ in structure, except that in the portion which secretes the white, they appear to have a longitudinal, in the portion where the shell is perfected, a transverse arrangement." (P. 6.)

The oviduct performs the same office to the ovarium which is effected by the fallopian tubes to the ovaria of the

\* From the study of the structure of the ovaria in animals, says Cuvier, some of the most brilliant results of comparative anatomy have been derived.

—REV.

† Plate 1, fig. 1 and 2.

mammalia: it is certainly the structure through which the ovum passes.

"At the period when a yelk bag is matured, a white line is formed across the centre of the capsule: this white line is from the absence of vessels; they become obliterated at that part, and this is well seen in injected specimens. In the direction of the white line, the capsule bursts; the yelk bag is grasped by the extremity of the oviduct, which appears endowed with a contractility *sui generis*; and being propelled downwards by a motion probably similar to the peristaltic, receives, as has been already stated, the white and shell." (P. 7.)

The structure of the oviduct, and its relative position to the ovarium, is the same in all the genera of birds, as far as Dr. Seymour's observation has enabled him to determine.

"It has only occurred to me to observe the parts in question in the crocodile, in the unimpregnated state.\* There are two ovaria and two oviducts, the latter resembling perfectly the same organ in birds. The infundibula were turned outwards, which renders it a matter of more than usual difficulty to account for the way in which the ova enter the oviduct. It is not improbable that a considerable change takes place in the relative position of parts when the animal is impregnated. The oviducts terminate on each side in the cloaca." (P. 10.)

Many curious and interesting facts are stated respecting the structure and functions of the ovaria in various other animals. Having sketched out, in the different classes of vertebrated animals, the structure of the ova which contain the germ, we find that in fish, the amphibia, and birds, they exist previously to impregnation; when fecundated, pass into a tube, where they receive the coverings necessary to protect them from external violence, until the young animal is ready to be ushered into the world.

"To carry this analogy to the mammalia, and subsequently to the human being, is easy: the Graafian vesicles present the greatest resemblance to the ova of other animals; they become larger, more turgid, and more vascular, at puberty. After impregnation, fissures are observable in the external coat of the ovarium, and a hollow space is visible in its substance, once filled by the vesicle round which a new body is formed: all this can be demonstrated, and can be seen by any observer." (P. 15.)

These circumstances led to the opinion, in which De Graaf, and all the eminent physiologists who immediately succeeded him, participated, that the Graafian vesicles were ova, similar, in the human species and the mammalia, to what the ova in birds, reptiles, and fish were to their

\* Plate 2.

respective kinds. By some distinguished physiologists, especially of the Italian school, this opinion was opposed. It was said, if the corpora Graafiana were really ova, they should be detected in their passage through the fallopian tube; and in some animals where they are very large, and the canal extremely small, such passage would be impossible. De Graaf asserted that he saw the ova in the fallopian tube; but neither Hartmann, Valisneri, nor Haller, in numerous experiments for the purpose, ever succeeded in seeing the vesicle or ovum in the fallopian tubes or uterus. Since this period, however, they were distinctly seen by Haighton and Cruickshank, who confirmed De Graaf's experiments. Here, however, arose a fresh difficulty: the ova thus seen were greatly smaller than the unimpregnated Graafian vesicle.

"Satisfied, from all the observation it has been in my power to make, that the original opinion is the correct one, the difficulties may be reconciled from considering that the ova in the different classes do not contain similarly arranged matter. Thus the yolk bags in birds, amphibia, and fish, contain not only the germ of the future foetus, but a considerable portion of aliment for its subsistence: hence they bear a much larger proportion to the animal than the corpus Graafianum to man; but in the mammalia no such provision is necessary. The more perfect being requires a longer period for maturity, and a different arrangement for its nourishment, and this is provided in the uterus; hence the Graafian vesicle contains probably only sufficient fluid to protect the germ from injury, and, when grasped by the fallopian tube, the contents of the vesicle are discharged, and the rudiment, not the entire vesicle, carried to the uterus. Such is the fair conclusion, and not that the laws of nature, so uniformly and beautifully adapted to the end in view, are changed, and an entirely new process, untraceable to the senses, substituted in their place." (P. 16.)

The experiments of Baer prove, indeed, to demonstration that such conclusions are correct. He has seen the ovum, contained in the vesicle in the ovarium, exactly similar to those which he (as well as Haighton and Cruickshank) found in the fallopian tube. Many conflicting opinions have been maintained upon the question of whether the fallopian tubes in the mammalia, and the oviducts in the other vertebrated animals, convey the seminal fluid to the ovum. The numerous experiments on record, and all the comparisons he has been enabled to make between the process in various animals, lead Dr. Seymour to the conclusion "that the fallopian tubes convey the fecundating fluid to the ova, and are the media through which the ova pass to the uterus in more perfect animals,

and prepare them for the process of incubation in the less perfect."

A brief sketch is given of the discussions which have arisen respecting the formation of the corpora lutea. One of the latest authors on this subject is Sir Everard Home, whose "views entirely accord with those of Malpighi, Valisneri, &c., although he does not allude either to their opinions or experiments." That corpora lutea exist occasionally without impregnation, must be admitted by all. That they occur after impregnation is certain, and proved by the observations of Haller, who traces their gradual formation. If, as supposed by Sir E. Home, they are necessary to render the ovum fit for impregnation, they should exist nearly always in virgin animals at the time of puberty.

"This is by no means the case. It has occurred to me to have examined the ovaria in the human being and in animals at the period of puberty, in very many instances: many had ova ready for impregnation, large, projecting, vascular, yet no corpora lutea were visible, which induces the following conclusion, that in every instance these animals must have been barren, or that the formation of corpora lutea is not a necessary preliminary process to impregnation.

"From these premises, comparisons, and observations, my opinion has been formed, that corpora lutea are the result of the change which takes place in the ovarium by the bursting and discharge of the ovum, occurring rarely in virgin animals, because the bursting of the ovum is not a frequent, but only possible occurrence, but always following impregnation, and diminishing as gestation proceeds." (P. 32.)

The corpora lutea are the vascular remains of the Graafian vesicle, after its rupture and the discharge of its contents. It is believed that in human beings certain feelings of the mind are sufficient to determine the rupture of the vesicle. In birds, an egg passing into the oviduct, the membrane which formerly contained it, shrinks; but this occurrence takes place equally whether the ovum which so passes be or be not impregnated. In order to prove that such an effect may occur from excited feelings, eggs have been produced from birds by impressions calculated to promote such feelings, without the presence of the male bird. Haller believed that the corpus luteum was the product of conception alone. The opinion of this great physiologist was opposed by Buffon, Bertrandi, Valisneri, and other Italian anatomists, who assert that they had found corpora lutea in the ovaries of many virgins; and according to the observations of the ingenious Blumenbach, the ex-

itement of solitary sensuality, or of a barren marriage, may equally give rise to the formation of these productions. Brugnoli, also, has stated several anatomical facts,\* which show that the corpora lutea may exist before impregnation.

"It may here be asked, of what advantage is it to determine accurately the formation of these bodies? We have seen that their production is probably influenced by strong moral as well as physical impressions, the result of great vascular excitement of the part, and their absorption effected by great activity in the vessels of that system. Any deficiency, then, in the quantity of vascular excitement necessary, any obstacle to the exercise of absorption, would produce changes in these parts differing from the natural ones which they were intended to undergo, would, in a word, produce disease; and it remains to be discovered whether any of the serious and complicated diseases of these organs are to be traced to alterations which the corpora lutea undergo from any or all of these causes." (P. 33.)

Dr. Seymour observes, that in the human being, in extremely rare cases, one ovarium has been found wanting, yet the female has borne children; and one being destroyed by disease has repeatedly been found to be no prevention against the female becoming a mother, from ova formed in the remaining organ. The knowledge of rare deviations from the natural structure can be but of little importance to the practitioner; but we may just observe that Morgagni (lib. i. p. 12, 13,) states that he had found both ovaries wanting. The same fact was ascertained some years ago at the Hospice de la Maternité at Paris. Poupert found in the body of a girl, seven years of age, that the left ovary had neither spermatic artery or vein.

Chapter II. "On the Diseases of Structure in the Ovaria." These diseases are various: they may arise from inflammation of the structures of which the ovarium is composed; from enlargement of the natural structure, or from the addition of new structure formed by disease, including scirrhus and fungoid growths, which, from their rapid progress, their assimilation of neighbouring structures, their coincidence with other cancerous diseases in the same patients, and their fatal tendency scarcely admitting of palliation, have received the appellation of malignant growths. Those deviations from natural structure which arise from obstruction in the function they are destined to perform, and those alterations of them which are probably congenital. The ovaria, like every other part of the body, are liable to inflammation.

\* *La Médecine éclairée par les Sciences Physiques*, par FOURCROY, t. ii. 142.—REV.

"It does not, however, appear that inflammation of the peritoneal covering of the ovaria takes place without general inflammation of that portion of the membrane which covers the fundus of the uterus, and, if it does, is not discoverable by any known or definite symptoms. No particular sensibility is increased, no particular sympathy with distant parts excited; nor can the remedies, therefore, be distinct from those which apply to inflammation of the uterus generally." (P. 38.)

Inflammation of an acute form may attack the substance of the ovarium, from which arises suppuration or softening of the part. These forms of disease usually depend upon acute inflammation of the womb, and its appendages, in women after labour. Chronic inflammation of the ovarium may exist independently of inflammation of the substance of the uterus or its coverings. Abscess of the ovarium Dr. Seymour states to be a rare disease: he describes one case of this kind. We may observe, that Portal (*Anatomie Médicale*) had seen the ovaria full of pus, and larger than the head of an infant. Chambon (*Traité sur les Maladies des Femmes*) also had frequently known inflammation of the ovaria terminate by suppuration. The pus has been discharged by the bladder. We quote the following curious case as an example, which was communicated in 1753 to the Académie Royale de Chirurgie.

A lady had complained for a long time of severe pains in the right lumbar region. Pus was discharged with the urine, and it was supposed that the right kidney was diseased. The patient died, and the kidney was found to be healthy; but the ovarium of that side adhered to the fundus of the bladder, where there was an opening which penetrated to the ovarium, and thus the pus passed into the bladder.

"Whether the Graafian vesicles are ever affected by inflammation, except when in common with the substance of the ovarium, it would be impossible to determine, except by long-continued and very accurate examination after death." (P. 41.) Dr. Seymour thinks it would be still more difficult to say what is or what would be the effect of inflammation of the corpora lutea; that is, of vascular excitement greater than what is necessary for their formation. The fluid which is contained in the Graafian vesicles is liable to disease: it is often red, and even black, from the admixture of blood; and it appears to Dr. S., from a case which he relates, that it may become altered from imperfect fecundation.

"By far the most frequent disease of the ovarium, and of course



that which occurs to our observation in practice, is the conversion of this organ into numerous cysts, of various sizes; or the production of similar cysts, having their origin in some part of the ovary; and when either the whole or some of these cysts contain fluid, the disease has received the name of ovarian or encysted dropsy. Under the name of ovarian dropsy have also been included simple serous cysts, formed in the broad ligaments and fallopian tubes.\* All these, confounded together under the name of hydatids, are distinguished from the latter by being nourished by vessels supplying them from the parts in which they are formed; vesicles to which the name hydatid is attached being nourished by their own blood-vessels, or, in other words, having an independent life. Occasionally one or both ovaria are converted into simple cysts; the whole of the cellular substance and vesicles disappearing, that which was the fibrous coat of the ovary becoming the fibrous coat of the cyst.

"The first form of this disease, and the simplest, is from an enlargement or alteration of the corpora Graafiana. At an advanced period of life, on cutting into the ovary, one or more of the Graafian vesicles are found dilated; and these bodies, generally the size of a millet seed, become as large as an almond, are filled with limpid fluid, and their internal membrane becomes very vascular. Such is a common appearance; but occasionally they enlarge to a greater degree, and always on the side nearest the proper coat, which becomes distended often to an enormous size.† In this way it appears to me that a large single cyst with a fibrous covering may be formed; and this is the simplest form of ovarian dropsy, the internal membrane secreting a prodigious quantity of fluid. The same opinion is entertained by Cruveilhier, and expressed in his work on Morbid Anatomy, still in progress of publication. His words are these: 'L'ovaire est converti en une poche unique, qui peut acquérir un volume tel qu'elle remplisse la presque totalité de l'abdomen, à la manière d'une ascite. Il est probable que dans ce cas une seule vesicule aura par son développement effacé le reste de l'organe qu'on rencontre atrophié sur l'un des points de la circonférence de la poche, et confondu avec des épaissements cartilagineux et osseux.' One or two of the Graafian vesicles undergo this change, when the disease consists of one or two thin cysts filled with fluid." (P. 44.)

Encysted ovarian dropsy may exist for years without much distress, and may furnish, by paracentesis, a wonderful quantity of fluid. A patient of Mr. Keate's, in St. George's Hospital, in 1828, was tapped four times in three years, and seventy-five pints of fluid were withdrawn:

\* Plate 8.

† "A similar disease affects the ovary in birds, one or more of the yolk bags becoming enlarged and distended by the accumulation of transparent white fluid. It has been often seen in domestic fowls."

she is now alive. This quantity, however, is trifling in comparison with many well-attested cases on record.

"The ordinary symptoms attendant on ovarian dropsy are very various, and by no means severe, and are limited principally to the effects of pressure on the neighbouring parts. Where the increase of the disease is slow, the patient often suffers no other inconvenience than from swelling of the leg on the side on which the tumor is largest, or from the unsightly bulk of the abdomen, which she is unable to conceal. Patients have lived in this manner thirty or forty years, with a very considerable enjoyment of the comforts of life, and even the pleasures of the world,\* the accumulation of fluid rendering it necessary from time to time to perform the operation of paracentesis. In cases of this kind, symptoms dependent on unusually rapid increase of bulk, or pressure on any particular organs in the abdomen, occur. Thus heartburn, vomiting, and purging, difficulty of passing urine, or violent and severe headach, are met with, which are entirely removed if the bulk of the tumor be reduced. There is a case now under the care of Mr. North, where the patient has for many years been unable to pass her urine, except by the daily use of the catheter; and this appears to arise from the natural situation of the bladder being altered by pressure, and perhaps by the adhesion of the tumor." (P. 48.)

Various opinions have been entertained by the most eminent practitioners as to the nature of the case here alluded to. We agree perfectly with Dr. Seymour, who was kind enough to give his opinion, that the disease is encysted ovarian dropsy. The origin, progress, and attendant symptoms of the case appear to show that such is the fact. Dr. Macleod is also of this opinion. The chief distress which this lady suffers is from the excessive bulk of the tumor. She menstruates with difficulty and pain, and the discharge is very small in quantity. There is one circumstance respecting this case which appears remarkable: for upwards of five years we were obliged to introduce the catheter twice daily, with the exception of about a dozen times, when the usual quantity of water was passed without assistance. It is curious that the bladder should still retain its expulsive power, when so seldom called into action. The patient now remains in the same state, and still requires the daily use of the catheter, in the introduction of which some adroitness is required, in consequence of the

\* One of the most remarkable instances of this is related by M. FRANK. "A case is known of a girl affected with ovarian dropsy at thirteen years of age, having lived to the age of eighty-eight, notwithstanding the size of the tumor, which occupied the whole of the lower belly."—*Médecine Pratique de Pierre Frank*, p. 236.

pressure of the tumor upon the neck of the bladder. The surgeon who was first consulted failed in his attempts, and the second occupied upwards of two hours in the operation. We may be allowed some self-gratification for having succeeded with little or no difficulty.

When both ovaria are diseased in this way, Dr. Seymour states that the catamenia are always absent; when only one ovarium is affected, they are sometimes irregular, sometimes absent altogether.

The diagnosis of this disease is sometimes difficult. The distinctions between ovarian dropsy and ascites are pointed out: they are often, however, very obscure, and can hardly lead to a definite opinion as to the nature of the case. In general, ovarian dropsy continues throughout the whole course of life. It sometimes, however, disappears under very remarkable circumstances; either by adhesion being formed between the tumor and some portion of the great intestine, the matter being passed by stool. In such cases the patient often recovers. The fluid has been discharged by the vagina. Occasionally, after adhesion between the cyst and the parietes of the abdomen, spontaneous rupture takes place at the umbilicus, and the contents of the cyst are discharged, and the patient survives.

"Through the kindness of Dr. Locock, a case in which an attempt at a termination of this kind occurred came under my observation last autumn. A woman, of about fifty years of age, had suffered for several years from an enormous encysted dropsy, springing apparently from the right ovarium: a fistulous sinus had formed at the right of the umbilicus, from which the fluid constantly dripped when any increase of the secretion greater than ordinary occurred; and thus the distention of the patient, otherwise unendurable, was relieved." (P. 53.)

Dr. Blundell relates the following case in his lectures. A lady afflicted with this disease, falling from a carriage, struck her belly against a stone; a considerable discharge of urine occurred. She recovered, married, and, dying subsequently of retroversion of the uterus, the cyst of her former complaint was found to have burst, and its contents, effused into the abdominal cavity, to have been absorbed. Rupture of the cyst, however, must always be considered highly dangerous.

Dr. Seymour refers to the experiments of Magendie and Blundell, which prove that bland fluids may be injected into the peritoneal and pleural cavities of animals, without necessarily inducing death; and he observes, that the albuminous fluid contained in some ovarian cysts may be sup-

posed to be little irritating. The whole of the ovaria have been said to be sometimes converted into bone. Such cases Dr. Seymour has never seen, and the various museums of morbid anatomy in this city contain no such examples.\* Scrofulous disease occasionally attacks the ovaria, especially in young girls.

Scirrhus, and malignant or fungoid diseases of the ovarium, are next described, of both which forms of disease cases are detailed, to point out their progress and effect upon the constitution of the patient.

"One of the most frequent morbid appearances connected with the ovarium, arises from tumors either in the substance of the ovarium or attached to it by a peduncle, containing hair and adipose matter, and imbedded in some portion of the mass or the fibrous membrane which surrounds it: a portion of bone is often observed, sometimes part of an alveolar process containing one or more teeth, and occasionally a well-formed jaw with perfect teeth." (P. 82.)

There are numerous and well-authenticated cases of this kind on record. In what manner these growths are produced in the ovaria, still remains doubtful. Dr. Seymour believes that they are the result of an imperfect conception in the mother of the individuals in whom they are found.

Fœtuses are occasionally developed in the ovarium. This occurrence cannot happen without in some measure constituting a disease of the part. The natural form and texture of the ovarium must be altered, as well as the vital properties of the organ. This species of pregnancy, also, in most cases, gives rise to serious symptoms, which lead to the destruction of the infant and the mother.

Chapter III. "Treatment of Diseases of the Ovarium." Inflammation of the acute form attacking the ovarium seems best relieved by local depletion, as cupping on the loins and sacrum; the tepid bath, opiates, rest, and a recumbent posture. Where abscess in the ovarium adheres to the adjacent parts, the patient's strength must be supported by bark, light nourishing diet, and mild aperients. Rest and pure air are here of essential service. Scrofulous disease of the ovaria, Dr. Seymour apprehends, seldom occurs without symptoms of a similar disease in other organs of the body. Remedies which invigorate the health, pure air, nourishing diet, a mild and equal climate, and alkaline medicines are recommended.

\* In the Dict. des Sc. Med. t. 39, p. 21, a case of this kind is referred to.  
—REV.

*Simple encysted Dropsy.* It does not appear that the quantity of fluid contained in the cyst can be diminished by diuretic remedies; but the disease is not unfrequently combined with effusion into the peritoneum, and then the bulk and distress of the patient are greatly relieved by diuretics. Of these, the most powerful which have occurred to Dr. Seymour are infusions of digitalis and of the pyrola umbellata. Emetics have been employed, from their known power of promoting absorption. Bloodletting and mercurials are often important auxiliaries. Long-continued frictions have appeared to be very useful, the dropsy having gradually and entirely disappeared under such treatment. A case of this kind occurred to Dr. C. M. Clarke. Upon the subject of tapping Dr. Seymour observes, that "very many times life has been protracted by the operation many years, and probably in this, as in many other cases, it is desirable to avoid extremes; not to have recourse to paracentesis earlier than appears necessary, on the one hand, nor to let the patient languish in unendurable distention on the other, from a vain fear, which at last may not be realized, of the rapid re-collection of the fluid." Two methods have been proposed for emptying the cyst, and for promoting its entire contraction.

"1. A considerable incision, in order to empty the cyst entirely of its contents, leaving in a canula or bougie, to excite contraction of the cyst, and prevent the re-collection of fluid.

"2. Injections into the cyst." (P. 99.)

In a few cases, both these modes of treatment have succeeded, but they cannot be recommended with much confidence.

"Leaving in the canula, or a bougie, after paracentesis, has been frequently tried. I am indebted to my friend Mr. Key, senior surgeon to Guy's Hospital, for a note of three cases in which he employed this practice; and, as it has failed in the hands of this scientific and accomplished surgeon, I fear it is not likely ever to be attended with the success which would establish its general employment." (P. 103.)

Dr. Seymour candidly confesses that, in true scirrhus and malignant diseases of the ovarium, he is unable to propose any remedy which can be much relied on. Mercury, iodine, caustic, alkali, conium, and muriate of lime, have each been supposed to cause the removal of these morbid growths, but to be more effectual in recent cases, where the tumors are soft and spongy in their texture, than in those of a solid or fibrous character. Upon each of these remedies Dr. S. offers many instructive practical observa-

tions. The efficacy of iodine, he thinks, has been greatly overrated. In diseases of a malignant nature affecting internal parts, the *Liquor Potassæ*, in as large doses as the stomach will bear, has appeared to Dr. Seymour to have produced more alleviation than any other remedy with which he is acquainted. In ovarian disease, of the kind now under consideration, it has appeared to be useful. Conium does no more than relieve pain. Repeated blisters have been recommended by Mr. Abernethy, but Dr. S. has little confidence in this practice. Muriate of lime is said to be inferior to the *Liquor Potassæ*, as far as the observation of the author extends. Dr. James Hamilton, however, strongly recommends it; but he conjoined with it percussion of the tumor, and he states that, in seven cases where this plan was adopted, the enlargement so completely subsided that it was no longer tangible. The last measure for the cure of this disease, and of which in modern times we have heard much, is the extirpation of the whole tumor. This operation has been recently successfully performed several times on the continent, and in our own country by Mr. Lizars\* of Edinburgh. "But the arguments against such an operation are numerous and strong, and the probabilities of success are very small."

The subject of hernia of the ovarium is not touched upon. This disease is by no means common, nor is it easily distinguished from some others. It has even been confounded with enlargement of the inguinal glands. A celebrated French practitioner, M. Deneux, has collected all the published cases of hernia of the ovaria, and an interesting abstract of his work is given in the *Dict. des Sciences Med.* t. xxxix. p. 34.

To both medical and surgical practitioners Dr. Seymour's work must be highly interesting. He has given, in a concise form, a very perspicuous and instructive account of the information we possess relative to the structure, functions, and diseases of the ovaria, together with their treatment. The skill he has evinced in his selections from the materials of previous inquirers, and still more his original observations, prove that he possesses a sound practical knowledge of his subject. The low price of the work bears testimony also to his liberality and disinterestedness.

The accompanying lithographic engravings are beautifully executed, and without their assistance the work would have been much less useful.

\* See Mr. LIZAR'S work on Operations for Diseased Ovaria.

*Elements of Physics, or Natural Philosophy, General and Medical, explained independently of technical Mathematics.* In two Volumes. Vol. II. Part I. *comprehending the Subjects of Heat and Light.* By NEIL ARNOTT, M. D. of the Royal College of Physicians.—8vo. pp. 320. London: Longman, and Underwood, 1829.

WE derived so much amusement and instruction from the first volume of Dr. ARNOTT'S *Elements of Natural Philosophy*, that we must confess ourselves somewhat to blame for not having before directed the attention of our readers to the present continuation of the work, in which are comprehended the subjects of "Heat and Light." The second part of the volume, comprising the subjects of "Electricity, Magnetism, and Astronomy," and concluding the work, will, we believe, speedily be published.

In the fourth edition of the first volume, Dr. Arnott gave a complete explanation of the hitherto unknown nature of the defect called *stuttering* or *stammering*; "and the discovery of its nature has suggested to the author an effectual remedy, so simple that sufferers in general will be able at once to adopt it from the description now given." That the purchasers of former editions may not be obliged to procure the last on this account alone, Dr. A. very liberally prefixes to this volume an appendix to the early editions; and as it is brief, and of much practical importance, we give it in his own words:

"The most common case of stuttering is not, as has been almost universally believed, where the individual has a difficulty in respect to some particular letter or articulation, by the disobedience, to the will or power of association, of the parts of the mouth which should form it, but where the spasmodic interruption occurs altogether behind or beyond the mouth, viz. in the glottis, so as to affect all the articulations equally. To a person ignorant of anatomy, and therefore knowing not what or where the glottis is, it may be sufficient explanation to say, that it is the slit or narrow opening at the top of the windpipe by which the air passes to and from the lungs, being situated just behind the root of the tongue. It is that which is felt to close suddenly in hiccup, arresting the ingress of air, and that which closes, to prevent the egress of air from the chest of a person lifting a heavy weight, or making any straining exertion; it is that, also, by the repeated shutting of which a person divides the sound in pronouncing several times, in distinct and rapid succession any vowel, as o, o, o, o. Now, the glottis during common speech need never be closed, and a stutterer is instantly cured if, by having his attention properly directed to it, he can keep it open. Had the edges or thin lips of the glottis

been visible, like the external lips of the mouth, the nature of stuttering would not so long have remained a mystery, and the effort necessary to the cure would have forced itself upon the attention of the most careless observer; but, because hidden, and professional men had not detected in how far they were concerned, and the patient himself had only a vague feeling of some difficulty, which, after straining, grimace, gesticulation, and sometimes almost general convulsion of the body, gave way, the uncertainty with respect to the subject has remained. Even many persons who, by attention and much labour, had overcome the defect in themselves, as Demosthenes did, have not been able to describe to others the nature of their efforts, so as to ensure imitation; and the author doubts much whether the quacks who have succeeded in relieving many cases, but in many also have failed, or have given only temporary relief, really understood what precise end in the action of the organs their imperfect directions were accomplishing.

"Now a stutterer, understanding of anatomy only what is stated above, will comprehend what he is to aim at, by being further told that, when any sound is continuing, as when he is humming a single note or a tune, the glottis is necessarily open, and, therefore, that when he chooses to begin pronouncing or droning any simple sound, as the *e* of the English word *berry*, (to do which at once no stutterer has difficulty,) he thereby opens the glottis, and renders the pronunciation of any other sound easy. If then, in speaking or reading, he joins his words together, as if each phrase formed but one long word, or nearly as a person joins them in singing, (and this may be done without its being at all noted as a peculiarity of speech, for all persons do it more or less in their ordinary conversation,) the voice never stops, the glottis never closes, and there is of course no stutter. The author has given this explanation or lesson, with an example, to a person who before would have required half an hour to read a page, but who immediately after read it almost as smoothly as it was possible for any one to do; and who then, on transferring the lesson to the speech, by continued practice and attention, obtained the same facility with respect to it. There are many persons, not accounted peculiar in their speech, who, in seeking words to express themselves, often rest long between them on the simple sound of *e* mentioned above, saying, for instance, hesitatingly, 'e I e..... think e.....you may;' the sound never ceasing until the end of the phrase, however long the person may require to pronounce it. Now a stutterer, who, to open his glottis at the beginning of a phrase, or to open it in the middle after any interruption, uses such a sound, would not even at first be more remarkable than a drawing speaker, and he would only require to drawl for a little while, until practice facilitated his command of the other sounds. Although producing the simple sound which we call the *e* of *berry*, or of the French words *de* or *que*, is a means of opening the glot-



tis, which by stutterers is found very generally to answer, there are many cases in which other means are more suitable, as the intelligent preceptor soon discovers. Were it possible to divide the nerves of the muscles which close the glottis, without at the same time destroying the faculty of producing voice, such an operation would be the most immediate and certain cure of stuttering; and the loss of the faculty of closing the glottis would be of no moment.

"The view given above of the nature of stuttering and its cure, explains the following facts, which to many persons have hitherto appeared extraordinary. Stutterers often can sing well, and without the least interruption; for, the tune being continued, the glottis does not close. Many stutterers can also read poetry well, or any declamatory composition, in which the uninterrupted tone is almost as remarkable as in singing. The cause of stuttering being so simple as above described, one rule given and explained may, in certain cases, instantly cure the defect, however aggravated, as has been observed in not a few instances; and this explains also why an ignorant pretender may occasionally succeed in curing, by giving a rule of which he knows not the reason, and which he cannot modify to the peculiarities of other cases. The same view of the subject explains why the speech of a stutterer has been correctly compared to the escape of liquid from a bottle with a long narrow neck, coming 'either as a hurried gush or not at all;' for, when the glottis is once opened, and the stutterer feels that he has the power of utterance, he is glad to hurry out as many words as he can, before the interruption again occurs.

"Should the author's future experience enable him to simplify or render more complete the views of the nature and cure of stuttering which he has given above, so as to facilitate the cure in every variety of case, he will not fail to publish his remarks." (P. v.)

We cannot enter into a formal analysis of the immediate subjects of the volume before us. Our object is merely to do justice to Dr. Arnott, by strongly recommending the perusal and study of it. It is the duty of every medical student to acquire at least an elementary knowledge of such important subjects as heat and light, both of which involve many points that are intimately connected with his profession. It is his interest also, because it is impossible he can mix in the society of men of liberal education without sometime or other hearing these subjects discussed, and if he is found to be unacquainted with them, a disadvantageous comparison may very probably be drawn between his philosophic and professional information. The great merit of Dr. Arnott's style, and mode of illustrating even abstruse problems, is simplicity. In his work we have not

to lament the dry and repulsive manner, and the incessant recurrence of mathematical perplexities, which absolutely frighten the junior student, and not unfrequently puzzle the inquirer of maturer age: his "*Elements of Physics*" may be taken up when the mind is fatigued with more severe labours; and if the student will occasionally bestow an hour in the perusal of it, he will quickly find himself in possession of much useful and highly interesting information, at half the expense of time and mind that would be required if he consulted other works upon the same subjects. The utility of the work is also much increased by the numerous illustrative diagrams which are given in various pages.

The first part of the second volume is divided into two sections: the first section is "on Heat," and from it we quote the following passage.

*"The Functions of Animal Life a Source of Heat."*

"It is one of the remarkable facts in nature, that living animal bodies, and to a certain degree living vegetables also, have the property of maintaining in themselves a peculiar temperature, whether surrounded by bodies that are hotter or colder than they. Captain Parry's sailors, during the polar winter, where they were breathing air that could freeze mercury, still had the natural warmth in them of 98° of Fahrenheit; and the inhabitants of India, where the same thermometer stands sometimes at 115° in the shade, have their blood at no higher a temperature.

"It was at one time the favorite explanation of this, that animal heat was produced in the lungs, during respiration, from the oxygen then admitted. This oxygen combines with carbon from the blood, and becomes carbonic acid as in combustion, and it was supposed to give out a portion of its latent heat, as in actual combustion; which heat being then spread over the body by the circulating blood, maintained the temperature. We now know that if such a process assist, which it probably does, (for the animal heat has generally a relation to the quantity of oxygen expended in any particular case, and when an animal, being already much heated, needs no increase, very little oxygen disappears,) still much of the effect is dependent on the influence of the nerves, either directly or indirectly through the vital functions governed by them. Mr. Brodie, in his important experiments upon the subject, found that, although in animals apparently dead from injury done to the nervous system, he could artificially continue the action of respiration, with the usual formation of carbonic acid, still the temperature fell very quickly. The maintenance of low temperature in an animal immersed in air hotter than itself, is partly attributable to the copious perspiration and evaporation which then take place, and which absorb into the latent form the

excess of heat then existing. Perspiration, both from the skin and internal surface of the lungs, occurs generally in proportion to the excess of heat. Dogs and other animals, when much heated, as they cannot throw off or diminish their natural covering, increase the evaporating surface by protruding a long humid tongue.

"The power in animals of preserving their peculiar temperature, has its limits. Intense cold coming suddenly upon a man who has not sufficient protection, first causes a sensation of pain, and then brings on an almost irresistible sleepiness, which, if indulged, would be fatal. Sir Joseph Banks having gone on shore one day near the cold Cape Horn, and being fatigued, was so overcome by the feeling mentioned, that he entreated his companions to let him sleep for a little while. His prayer granted, might have allowed that sleep to come upon him which ends not, the sleep of death! as, under similar circumstances, it came upon so many thousands of the army which Bonaparte led into Russia, and lost there during the disastrous retreat through the snows. Bonaparte's celebrated bulletin allowed that in one night, when the thermometer of Reaumur stood at nineteen degrees below zero, 30,000 horses died! Cold in inferior degrees, and longer continued, acting on persons imperfectly protected by clothing, &c., induces a variety of diseases, which destroy more slowly. A great excess of heat, again, may at once excite a fatal apoplexy; and heat in inferior degrees, but long continued, may cause those fevers, &c. which prevail in warm climates, and which are so destructive to strangers in these climates.

"Each species of animal has a peculiar temperature natural to it, and in the diversity are found creatures fitted to live in all parts of the earth; what is wanting in internal bodily constitution being found in the admirable protecting covering which nature has provided for them; covering which grows from their bodies, with form of fur or feather, in the exact degree required, and even so as in the same animal to vary with climate and season. Such covering, however, has been denied to man; but the denial is not one of unkindness: it is the indication of his superior nature and destinies. Godlike reason was bestowed on man, by which he subjects all nature to his use, and he was left to clothe himself.

"The human race is naturally inhabitant of a warm climate, and the paradise described as Adam's first abode may be said still to exist over vast regions about the equator. There the sun's influence is strong and uniform, producing a rich and warm garden, in which human beings, however ignorant of the world which they had come to inhabit, would have their necessities supplied almost by wishing. The ripe fruit is there always hanging from the branches; of clothing there is required only what moral feelings may dictate, or what may be supposed to add grace to the form; and as shelter from the weather, a few broad leaves spread on connected reeds, will complete an Indian hut. The human family, in multiplying and spreading in all directions from such a

centre, would find, to the east and west, only the lengthened paradise, with slightly varying features of beauty; but to the north and south, the changes of season, which make the bee of high latitudes lay up its winter store of honey, and send migrating birds from country to country in search of warmth and food, would also rouse man's energies to protect himself. His faculties of foresight and contrivance would come into play, awakening industry; and as their fruits, he would soon possess the knowledge and the arts which secure a happy existence in all climates, from the equator almost to the pole. It is chiefly because man has learned to produce at will, and to control, the wonderful principle of heat, that in the rude winter, which seems the death of nature, he, and other tropical animals and plants which he protects, do not in reality perish, even as a canary-bird escaped from its cage, or an infant exposed among the snow hills. By producing heat from his fire, he obtains a novel and most pleasurable sort of existence; and in the night, while the dark and freezing winds are howling over his roof, he basks in the presence of his mimic sun, surrounded by his friends and all the delights of society; while in his storerooms, or in those of merchants at his command, he has the treasured delicacies of every season and clime. He soon becomes aware, too, that the dreary winter, instead of being a curse, is in many respects a blessing, by arousing from the apathy to which the eternal serenity of a tropical sky so much disposes. In climates where labour and ingenuity must precede enjoyment, every faculty of mind and body is invigorated; and hence the sterner climates form the perfect man. It is in them that the arts and sciences have reached their present advancement, and that the brightest examples have appeared of intellectual and moral excellence." (P. 157.)

The second section, "on Light and Optics," will be found very interesting and instructive.

The former volume of Dr. Arnott's "Elements" passed through four editions in this country, and was translated into several languages; and we have no doubt that its successor will meet with equal approbation and honours.

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*A Practical Treatise on Diseases of the Genitals of the Male; with a Preliminary Essay on the History, Nature, and General Treatment of Lues Venerea.* By JOHN MADDOX TITLEY, M.D.—8vo. pp. 403. Herbert, London, 1829.

DR. TITLEY commences his work with a preliminary essay on the history, nature, and general treatment of Lues Venerea. As it cannot be a matter of much importance to modern practitioners to ascertain precisely the period when

this disease first made its appearance, we shall not enter further into the subject of the history of its origin, than to observe that Dr. T. makes out a very plausible case from his literary researches to support his belief that lues venerea was known to the Old World from very early times. Mr. BACOT\* comes to a contrary conclusion: he thinks that, if there is any single historical fact that can be said to be proved, it is that of the origin of syphilis being referrible to the latter years of the fifteenth century. As it appears to us that this discussion is more calculated to display the literary acquirements of the respective disputants than to add to our useful information, we shall not even endeavour to reconcile these discordant opinions.

Dr. Titley next proceeds to inquire whether lues venerea, or any form of it, can be so discriminated as to constitute a nosological species, and he wishes it to be understood that, in discussing this question, whether lues venerea, or any type of it, can be considered as a specific disease, he proceeds upon the idea of a species, which prevails universally, and he thinks necessarily, in all the nosological arrangements of eruptive fevers, namely, that each has a distinct cause. "Though in smallpox, measles, plague, &c. we have types of each, varying considerably from each other, we consider all those types to be varieties, and not species, because we know and believe them to be owing to one primary cause, but modified by the constitution of the patient, or by some secondary, supervening, or contingent cause."

In the practical part of this work, it will be seen that several kinds of primary venereal sores are distinguished, and respective modes of treatment prescribed.

"This is, however, nothing more than an useful expedient to direct attention towards some striking symptomatic feature with which certain practice has been supposed best to correspond. These specified patterns of sores are in truth only the best substitutes we have for pathological criteria, and extend no further than to the first link of a disease. I have adopted them on limited, and perhaps I might say empirical ground, not as applicable to discriminate the whole train of a venereal attack, or as indicating the operation of any ascertained pathological cause. Such sores are, in my judgment, of the same species as sores found in other parts of the body, and originating in causes not venereal. They may be successfully treated on the same principles as we should apply in the treatment of ulcers in general, allowing something clearly to be due to the peculiar structure and functions of the parts concerned; so that we cannot sever these primary sores, or any of

\* Treatise on Syphilis, p. 17.

them, from association with ulcers of other parts and other causes. Even the advocates of mercury now admit that they may be healed on general principles of treatment; they only assert that a taint is left, which will break out afterwards in secondary symptoms. But we have a step farther to go, which completely overturns the doctrine of a syphilitic ulcer or chancre. No form of primary sore yet described is any thing more than a pattern arbitrarily selected from an endless number and gradation of forms, so blended and confounded together that no two appearances can be delineated, between which experience does not present sores with more or fewer of the characteristics of either; so that it is impossible to fix a limit where one species ends and another begins." (P. 26.)

Dr. Titley is opposed to the doctrine of Mr. CARMICHAEL, that each primary ulcer, of four several characters, which he has described, is, without exception, or with very rare and doubtful exception, followed by symptoms (when such ensue) of certain determinate types. The opinions of the most experienced army surgeons, as GUTHRIE, HENNEN, ROSE, &c. are adduced to show that extensive practical observation leads to conclusions which are destructive to the peculiar views entertained by Mr. Carmichael. Mr. Bacot\* very fully and satisfactorily argues this question: he is also opposed to the theory of Mr. Carmichael, of a variety of syphilitic poisons. After giving a brief sketch of the treatment adopted by the Portuguese surgeons, and of the experience of the English military surgeons of the non-mercurial plan of treatment,† Dr. Titley supports their conclusions by some powerful corroborations from practitioners of other countries.

An interesting document has lately been published in Sweden upon the subject of the comparative frequency of secondary symptoms of syphilis, after various modes of treatment, which is much in favor of the non-mercurial practice. During five years, 16,985 venereal patients were treated in the hospitals of that country. Of this number, 39½ per cent. were trusted solely to strict dietetic rules, and six weeks were generally found sufficient for the cures, if the symptoms were not very severe: secondary symptoms happened in the proportion of 7½ per cent. Local and other modes of treatment were ordered for 5½ per cent., and of these 7 per cent. had after symptoms. The mercurial treatment was adopted in 49½ per cent.: of cases of secondary symptoms there were 14 per cent. The fumiga-

\* Treatise on Syphilis, p. 71.

† Vide London Med. and Phys. Journal, August 1829, p. 137; Review of Mr. Bacot's Treatise, in which this subject is fully considered.

tory treatment by cinnabar was employed in  $6\frac{1}{2}$  per cent. : the relapses were 22 to 100.

"A line of practice very similar to that employed in the British military hospitals, is adopted by M. Fricke in the venereal cases admitted into the hospital at Hamburg. Every patient is bled to the amount of from six to twelve ounces, and the operation is repeated if necessary. About half a drachm of Sulphate of Magnesia is then given every three hours, and continued until repeated evacuations are produced. If the bowels afterwards become constipated, or the ulcers heal slowly, the use of the same remedy is renewed. As an external application to the chancres, Goulard water, or two grains of Sulphate of Zinc in six ounces of distilled water, is employed. When the size of the sore is much diminished, and it is no longer painful, lime water is used. If either of these lotions cause pain or inflammation, it is to be still further diluted.

"Buboes are first treated by compression, and, if resolution cannot be promoted, they are opened with a bistoury, and afterwards dressed with dry lint. Condylomatous tumors are removed by the knife, or cauterized, and the wound dressed with the same lotion as for the chancres. The patients are kept upon very low diet, consisting of vegetables, bread, and *soupe à l'eau*, twice a day. If at the end of a few days the symptoms are not alleviated, a few doses of mercury, in small quantities, are given, and are found sufficient to effect a cure.

"The results obtained by this mode of practice are highly satisfactory. Chancres and buboes are speedily cured, and the cicatrices are by no means so evident as when mercury has been employed. Chancres, from three to four lines in diameter, are generally cured, in female patients, in from one to three weeks; rather a longer time is required in male patients. M. Fricke, who has the advantage of retaining patients thus treated under his observation, has not yet observed any secondary symptoms." (P. 57.)

From these quotations, Dr. T. desires only to maintain the fact that every description of venereal disease may be cured without mercury, as certainly as by the aid of that medicine. The question whether either mode of treatment is to be preferred on any other ground than that of certainty, remains for subsequent consideration. Mr. CHARLES BELL\* attempted, upon very weak grounds, to prove the danger of the non-mercurial practice. His opinions are referred to by Dr. Titley, for the purpose of showing that the cases adduced by Mr. Bell "do not bear, in the slightest degree, upon the question whether the venereal disease ought to be treated by mercury or not, or disprove the as-

\* Surgical Observations, No. 5.

section that all simple venereal affections may be cured without it."

Having shown that mercury is in no sense a specific for any venereal disease, Dr. T. further maintains that lues is not a specific disease; inasmuch as its probable cause cannot be separated, by any sure distinction, from the cause of those affections, described under the denomination of pseudo-syphilis, and which have been believed to be produced independently of sexual intercourse.

Courses of mercury are objected to, but the author admits the utility of this medicine as an occasional alterative; or in some cases of fever, especially in a tropical climate, where he has seen large doses of calomel act like a charm; or in instances of acute inflammations, which demand an instant and powerful counter-agent. We perfectly agree in the estimate Mr. Bacot has formed of the advantages of the non-mercurial treatment, and we believe with him that, in a vast majority of cases, mercury is our sheet-anchor in the treatment of the venereal disease.\* No abstract rules can be laid down for the precise doses or forms of this remedy: they must depend in every case upon the effects produced, and upon the constitution of the patient. That the various evils enumerated by Dr. Titley have arisen from the employment of mercury, may be very true; but we believe, from extensive experience in public and private practice, that, provided the remedy be *judiciously* employed, it is both harmless and useful. We certainly would not restrict the use of mercury by the narrow limits assigned by Dr. Titley, nor would we administer it in the incautious and hazardous mode which was once deemed necessary for the eradication of the venereal disease; but we are convinced that mild courses of mercury are very frequently imperatively necessary.

Part I. "Diseases of the Penis." Amongst the various diseases to which the penis is liable, there are certain determinate kinds of ulceration, which have their origin in sexual intercourse, or in the direct application of some morbid matter secreted by the genitals. There are, again, other diseases of the male organ which may or may not originate in sexual commerce; as, for example, phymosis and paraphymosis: and, lastly, the penis is subject to various diseases, in common with other parts of the body, and having no reference to venereal congress. Dr. Titley

\* Bacot on Syphilis, p. 60; and review of the work, London Med. and Phys. Journal, p. 159, August 1829.



proposes to follow this arrangement in his subsequent detail; but he first briefly alludes to those parts of the organization of the penis which materially modify the appearance and progress of disease at this part.

Of the diseases which originate from sexual intercourse, the first form described is the elevated ulcer, than which there is no species of sore so frequently seen on the genitals.

"It is usually found either on the glans penis, or upon the internal or external part of the prepuce, (in which situation it frequently induces phymosis;) but it may also occur on any of the neighbouring surfaces, as on the scrotum, thighs, &c.

"The first indications of the disease, usually in a few days after sexual intercourse, are itching and redness; then a small pustule is formed, with more or less inflammation; over which, after two or three days, a thin crust or scab appears. The confined matter under the scab occasions considerable pain, until it is released by the bursting of the cuticle, or by a portion of the scab being otherwise detached. After each effusion the scab becomes enlarged by accession of concreted matter: at first the scab is yellow, but afterwards becomes gradually darker, until it is nearly black, the colour being deepest at the centre. In this state, about four or six days after the first symptoms, the disease is usually submitted to the inspection of the surgeon.

"From the fourth to the sixth day, the figure of the elevated ulcer, as it next appears, after entire removal of the scab, is oval or circular, and concave. The colour of the concavity is glossy brown, unhealthy red, or more frequently dusky or yellow.

"When situated on the angle between the glans penis and the prepuce, this ulcer has frequently a deeper concavity, accompanied for a short time by hardness of the surrounding texture. When situated on the inner surface of the prepuce, the frænum, or any part behind the glans, except that just spoken of, it generally has but little concavity.

"About the eighth or ninth day, the ulcer is marked by elevation of the whole surface: at length it assumes the appearance of a fungus, raised so as to project, in a body, beyond the level of the surrounding skin. The outer edge of the elevated body often protrudes still further beyond the surface of that body, and the whole then appears to be of considerable thickness, and, when examined only by the eye, would give an idea of hardness. The outer edge is seldom lower than the elevated surface. The whole projection is often very considerable, especially when the ulcer is situated on the external surface of the prepuce, on the body of the penis, and on the scrotum. On the scrotum, so great is the elevation that it often resembles a large wart.

"When the ulcer is situated on the internal surface of the prepuce, or on the angle between the glans penis and prepuce, the projection is not so remarkable; but, even at this part, that

pathognomic criterion is seldom dubious after the ninth day; when, by retracting the prepuce to its full extent, the elevated body cannot fail to be noticed at some point of the circumference.

"If the glans penis and internal prepuce be simultaneously ulcerated, a remarkable difference of appearance will be perceived in these parts at the period of fungus. On the prepuce the projection will be manifest; while on the glans penis a concavity will remain, and there the ulcer will rather continue an ulcerating progress than exhibit any granulations: when granulation has commenced, it will heal without any effort to project." (P. 77.)

The elevated ulcer has usually spread to its greatest extent from the eighth to the tenth day, and from the fourteenth to the eighteenth day has usually attained its greatest elevation. When it has attained its greatest height, it remains without variation for an uncertain period, after which it gradually, though very slowly, declines and heals. "To distinguish the elevated ulcer from other sores incident to the genitals, we have a sure criterion after the eighth day, in its elevated fungus, with an edge either higher or not lower than the surface of the fungus." Dr. Titley is of opinion that, in treating the elevated ulcer, a cure cannot be much accelerated, because the disease has a pretty well defined course.

"In its earlier stages, indeed, any interference, except for the purpose of allaying irritation, is commonly productive of mischief, and it is only after the ulcerative process has ceased, and the fungous state is established, that any thing can be done to accelerate a termination. During the state of pustule, means must be taken to protect it from friction; the bowels must be kept open; and, should there be much inflammation, (a circumstance which does not frequently occur,) the ulcer and neighbouring surface may be kept cool with a dilute lotion of subacetate of lead, or the spirit lotion. When the scab is forming, if there be much pain, a warm poultice will generally afford relief, and, when there is much irritation, it may be continued till the fungous state begins: it is sufficient to remove the scab by poultice or soft dressings, and the pain soon ceases; after which, spermaceti ointment will prevent the formation of scab, and, consequently, the recurrence of pain. If the scab be small, and there be no pain, it is best not to interfere." (P. 80.)

From friction of the clothes in walking, &c., inflammation, swelling, and phymosis often supervene. As precautions against these, rest, abstemiousness, and attention to the state of the bowels, are necessary. During the states of pustule and scab, it is essentially beneficial to confine the patient to bed. Thus bubo will be often prevented, or, should it be formed, resolution be much more proba-

ble; local irritation will be avoided or lessened, and constitutional affections frequently prevented. If there be much symptomatic fever, the antiphlogistic treatment must be pursued. During the fungous or declining states, the surface of the sore may be touched daily with sulphate of copper, "but so lightly as to stimulate merely, and not prove an escharotic." "The employment of mercury will often retard the healing of this ulcer, and keep it obstinately stationary for several weeks; and in many instances this medicine is positively injurious, causing the ulceration to extend rapidly."

The superficial ulcer is not of very frequent occurrence: Dr. T. believes it is not found except on the external and internal surface of the prepuce.

"It is preceded by a pustule, the contents of which, on escaping, form a scab, and, as the scab becomes extended, the cuticle disappears from beneath it. The figure of the superficial ulcer is circular, or approaching to circular. The extent varies: in ordinary cases the largest size is about that of a shilling, but considerably greater if neglected or illtreated, especially when the constitution is much disturbed. The colour is a lively red, and the surface is on a level with the skin of the surrounding part.

"When healing is in progress, the surface becomes gradually depressed, and the cavity is not subsequently filled up, but remains after the ulcer is healed. Occasionally, for a short time, a fungus rises as from the elevated ulcer, projecting beyond the level of the surrounding skin." (P. 83.)

The distinctions between the superficial ulcer and the elevated ulcer, the indurated ulcer of the internal prepuce, herpes præputialis, and simple excoriations, are pointed out.

"In the treatment of the superficial ulcer, it is most necessary to observe the constitutional symptoms which are intimately connected with the progress of the sore, and, these being of a highly inflammatory type, require to be controlled by decisive measures. By such proceeding, in this, as in the case of elevated ulcer, we not only accomplish an earlier local cure, but, in all probability, often avert consecutive disease, or at least moderate the severity of it. \* \* \*

"The constitutional disorder is most effectually subdued by bleeding, purgatives, and diaphoretics, in measure corresponding with the symptomatic indication. The local applications should be of a sedative kind during the inflammatory stage: a dilute lotion of subacetate of lead applied to the surface will generally be found most efficacious. If the sore become indolent, sulphate of copper, nitrate of silver, nitric acid, or the ointments of nitrate of mercury or subacetate of copper, and other stimulants, may be applied with advantage." (P. 85.)

The indurated ulcer is not of very frequent occurrence, at least within the range of Dr. Tittley's observation and inquiries. It is found only on the internal prepuce and glans penis. "In treating the indurated ulcer, when unattended by violent symptoms of general disturbance, extirpation of the hardened portion by the knife is at once the shortest and the surest method." If the constitutional disturbance run high, and no counter-indication forbids, general bleeding should be at once adopted, as the only resource on which sole dependence can be placed. Purgatives, diaphoretics, and the local application of refrigerating lotions, should be conjoined, together with confinement to bed, and a free circulation of cool air. "Mercury in this description of sore is generally either hurtful or useless: constitutional symptoms do not commonly follow when this medicine has not been given."

The callous ulcer seems to have been more prevalent than any other species during the period of Mr. HUNTER's practice; but, as Mr. ABERNETHY remarks, it is now so much less frequently met with, that many practitioners doubt whether there ever was such a disease as described by Mr. Hunter. Dr. T., however, has witnessed many examples of it, coinciding with his very good description, and completely vindicating his well-earned credit for accurate observation. For a description of this ulcer we must refer to the work. In the treatment of the callous ulcer, caustics have been employed, and, in Dr. T.'s opinion, they are highly useful, under certain limitations; but great discretion is necessary in the use of them.

"When the affection is recent, and we have fair grounds to hope that contamination has not been spread, the disease may be extinguished at once by caustic used with discreet freedom. On the contrary, when ulceration is completely established, caustics only produce aggravated evil, since the stimulant power of them urges mischief along the course of the lymphatics; and bubo, in such case, is very frequently a consequence.

"Nitrate of silver, which is very commonly used for this purpose, seldom destroys the entire sore; the inflammation which it produces increases the activity of the absorbents, and bubo is very often a consequence. A solution of sulphate of copper, on the contrary, effectually destroys the sore without producing irritation: this remedy should be employed in the proportion of a scruple of the salt to an ounce of distilled water, and is best applied on a pledget of lint. Absolute rest should be enjoined. If any redness be excited by the sulphate, a dilute lotion of subacetate of lead should be used, and a purgative dose of calomel given in the evening, with a requisite quantity of sulphate of magnesia in the

morning. If healing does not readily take place, then the ulcer should be touched with a camel's-hair pencil dipped in a solution of sulphate of copper, in the proportion of ten grains of the sulphate to an ounce of water." (P. 93.)

Mercury may, and perhaps should, says Dr. T., be prescribed in the treatment of this ulcer. It promotes absorption of the hardened edge, excites the languid action of the part, and accelerates the healing of the sore. If the stomach is irritable, mercurial frictions are to be ordered; but, when the state of the stomach does not contra-indicate the internal use of the medicine, the bluepill in moderate doses, conjoined with small doses of opium, is recommended. The continuance of this treatment is to be defined by the sensible effects produced. A gentle mercurial action is to be sustained. "The horrible practice of profuse salivation" is properly condemned. "There is considerable difficulty in treating the callous ulcer when it occurs at the orifice of the urethra, since it is acted upon by the urine, and so prevented from healing. A short gum elastic catheter should be introduced and worn, and the part defended by a mucilaginous lotion, or mild ointment spread on lint."

Dr. Titley is convinced that much evil results from too meagre a diet when a medicine is employed which makes such large demands on the powers of the body as mercury does. He would allow two or three glasses of wine daily, unless there be some obvious counter-indication. If the patient have been a free liver, his ordinary stimuli must be moderately continued. From irregularity of life, the callous ulcer will often, instead of its usual indolence, exhibit great irritability. Here mercury must not, on any account, be used: "the whole virile member has often been destroyed by mercury exhibited under these circumstances." A soothing plan of treatment must be adopted.

"The patient should keep the recumbent posture, with the penis and testes well supported; and the use of poppy fomentations and poultices will be found the best local means of subduing irritation. A lotion composed thus, Powder of Opium  $\mathfrak{z}\text{i}$ . Lime water  $\mathfrak{z}\text{viij}$ . mix and strain, and to the strained liquor add mucilage of Gum Arabic  $\mathfrak{z}\text{i}$ ., is also very effectual, and may be applied either warm or cold, as may be found best to agree with the feelings of the patient.

"After purging, opium should be given in repeated doses, combined with a saline, such as the liquor of the Acetate of Ammonia.

"In some cases it is necessary to make a decisive impression on the sanguiferous system, by abstracting blood from the arm; to reduce local inflammation by applying leeches, and to adopt a

completely antiphlogistic method. Thus the affection may often be arrested at once, and most destructive gangrene prevented. In general, however, we have to contend with constitutions that will not bear the loss of blood: in these cases, therefore, we must resort to the tranquillizing influence of opium, in conjunction with saline diaphoretics, and at the same time sooth the irritated part by emollient applications.

If the sore have already put on a sloughing appearance, and there be not much surrounding inflammation, the lotion of dilute nitric acid\* may be applied as a gentle stimulus, or poultices composed of the grounds of stale beer. Where the slough is large, and the parts at the same time sluggish, not evincing any sufficient effort to detach it, warm spirits of turpentine may be applied." (P. 97.)

If gangrene evidently results from deficiency of vital power, tonic means will be requisite, such as quinine with opium, diffusible stimuli, ammonia with musk or opium. Spirits, wine, or porter should be advised, with reference to the habits of the patient. In several cases we have had evidence of the truth of the following remark.

"It happens, not unfrequently, that a large sloughy sore, attended with a high state of inflammation and acute pain, and with corresponding constitutional disturbance, is rendered mild and tractable by a copious bleeding. This effect is often produced by a spontaneous effusion ensuing on the ulceration of vessels to which the sore has reached; when, in a few days afterwards, the slough separates, and the surface assumes a more healthy aspect." (P. 98.)

The subjects next discussed are the phagedæno-gangrenous ulcer, the sloughing ulcer, and buboes.

In the third chapter are described the various forms of secondary venereal affections. The treatment recommended is judicious.

Phymosis, Paraphymosis, and Excoriations, form the subject of the succeeding chapter, under the head of "Diseases which may or may not originate from sexual intercourse."

In the fifth chapter, Dr. T. treats of the different diseases which do not originate from sexual intercourse.

The second part of the work contains a good practical description of Gonorrhœa and Strictures of the Urethra. Diseases of the Scrotum and Testicles are next described.

The surgical student will obtain much valuable information from Dr. Titley's treatise, and to the practitioner the work will be found very useful, in cases of difficulty, as a book of reference.

\* This is prepared by adding one drachm of pure nitric acid to a pint of water. The strength may be varied according to circumstances.

## COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,  
Omnia nos, iidem, depascimur aurea dicta.

## ANATOMY.

*Rudiments of a Fœtus found in the Testicle of an Infant six months old.* By M. J. WENDT.—The wife of a blacksmith in a village near Glogau was delivered of a male child in December 1817. The infant was well made, and healthy. In May 1818 it came under the care of a surgeon, who discovered a hard tumor of the right testicle, with a congenital phymosis, which was cured by an operation. In the month of June, the diseased testicle had become so large as to descend quite to the knees. The tumor was cold, unequal, hard, and very sensible to the touch. It was removed by an operation in July; and the child, without the occurrence of any unpleasant symptom, was perfectly restored to health in less than a month. The extirpated testicle weighed about seven ounces. Its parenchyma was filled with an oily, ichorous, or yellow fluid. The epididymis was entirely wanting. When the tunica vaginalis was opened, a hard body was discovered, which proved to be a thigh bone deprived of periosteum. The bones of an imperfect pelvis were found along with it, connected together, and mingled with cellular tissue and muscular fibres. The rudiments of the lumbar vertebræ, and a lower extremity composed of skin, muscles, and bones, but exceedingly deformed, were also recognised. The other parts of the body appear to have been wanting.—*Journal Universel des Sc. Med.*

## PHYSIOLOGY.

*Proportion between the Nervous System and other Parts.* M. TIEDEMANN has reported several cases of defective development of the spinal marrow, as correspondent to a congenital absence of the limbs; and, on the other hand, cases of excessive development of the brain and nerves having relation to the existence of supernumerary organs. M. T. regards these phenomena as constantly observable in such cases. The Professor concludes that the nervous system, as being the first existing part of the animal, regulates the formation and ulterior development of the embryo, and determines the particular form and disposition of the other organs.—*Archives.*

*Sense of Touch.* The presence, in insects, of the ganglion which represents the brain, is not absolutely necessary for the existence of the sense of touch. After decapitation, they feel, on the surface and in their limbs, by means of their other ganglions, such impressions as may be made on them. The spinal marrow of reptiles, young birds, and young mammiferous animals, seems also capable, after the abolition of the brain, of being modified by irritations, of feeling them, and of occasioning, in consequence thereof, durable and calculated movements, which are not to be confounded with those convulsive and fugacious motions that are attributable solely to irritability. M. CALMEIL thinks that this faculty of the spinal marrow is probably diffused throughout its whole extent. Further, it is probable that, in the natural state of our func-

tions, the brain is the sole centre of irritability, and that the spinal marrow only becomes sensible when the brain ceases to exist. The co-ordination of our voluntary motions is doubtless attributable only to the brain.

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PATHOLOGY.

*Hemiplegia of Sensation, without Loss of Motion.* By M. LE SAUVAGE, of Caen. (*Bull. des Sc. Med.*)

Notwithstanding the multiplied researches of modern physiologists, and the ingenious experiments which have been devised to explain the mechanism of the functions of the nervous system, we are yet unable to determine what parts of the encephalon are the exclusive seats of sensibility, or voluntary motion. But few facts similar to the following are on record.

M. Lorient, seventy-three years of age, had always enjoyed good health. For a few days he had felt occasional giddiness, when, on the 10th March, he suddenly experienced a numbness in the whole of the left inferior extremity. It appeared to him as if his foot was sinking into the earth, and he held his thigh firmly with his hands, to prevent himself from pressing so heavily upon the ground. Almost at the same instant the numbness extended over the whole of the left side of the body. He hastened home in much alarm, and walked without difficulty. The next day he was in the following state: Intellectual faculties unimpaired; pulse unaffected. He could walk and move his arms as usual, excepting that the elevation of the arm by means of the deltoid was somewhat limited. He was not conscious of the movements he executed, nor of the impression of bodies which he touched. The skin of the whole of the left side of the body was perfectly insensible: it was pinched and pricked violently without producing pain, or indeed any sensation at all. On the anterior part of the body the median line was not the precise limit of the sensible parts. On the left side the skin was still easily sensitive to the extent of about an inch beyond the central division, but beyond this point it was perfectly insensible. On the affected side neither the sense of sight nor hearing was altered, but that of smell and taste was abolished. If the left side of the tongue was moistened with strong vinegar, the patient was unconscious of the slightest impression, whilst the flavor of the liquid was keenly perceptible by the other half of the organ. Strong odours placed under the nostril of the affected side were not perceived, excepting when M. L. drew a deep inspiration; but then the odoriferous molecules arrived at the right nostril by the posterior opening of the nasal fossa. When M. Sauvage placed his hand across the patient's head, that part only of it was felt which pressed upon the right half of the head. Every treatment that was suggested was ineffectual.

A few months after the attack, M. L. had resumed his ordinary occupations. For some time he felt occasionally dull transient pains on the hemiplegic side. He could move the limbs of that side without difficulty, but still he felt their motive powers were inferior in degree to those of the other side. In other respects the constitution of the patient had not apparently suffered.

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In the third volume of the *Medico-Chirurgical Transactions*, Dr. YELLOLY relates a somewhat similar case. The patient, a man, after being much heated and fatigued, slept with the window open. In the morning his feet and ankles were numb, without pain, and without the muscular power being



at all affected. A tingling in the little finger afterwards occurred, and gradually both hands were in a considerable degree insensible. The hands up to the wrists, and the feet half-way up to the leg, were perfectly insensible to any species of injury, as cutting, burning, &c. The insensibility did not suddenly terminate; it existed to a certain degree nearly up to the elbow, and for some distance above the knee. He accidentally put one of his feet into boiling water, but was no otherwise affected by it, or aware of the high temperature, than by finding the whole surface a complete blister on removing it. Extremities insensible to electricity. His skin, in general, healed very readily after being burnt or scalded. The existence of muscular power, and the faculty of directing its exercise by the will, remarks Dr. Yelloly, where the nerves have entirely lost that sensibility which is always regarded as necessary to the conveyance of volition from the sensorium, are circumstances apparently irreconcilable with any knowledge which we at present possess of the mechanism by which the will acts in the production of voluntary motion.\* Thanks, however, to the investigations of modern physiologists, we are now capable of understanding how it is that muscular power may be preserved whilst sensation is lost, or vice versâ. If the anterior fasciculus of the spinal nerves be affected, motion will be impaired, and sensation remain; if the posterior fasciculi be affected, sensation will be impaired, while motion will remain. The above examples, then, though curious from their infrequency, can no longer be regarded as pathological wonders, but as interesting illustrations of the correctness of the opinions of modern physiologists.

EDITOR.

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*Spontaneous Combustion of both Hands.* The following case of spontaneous combustion, from the *Archives gén. de Médecine* for March 1829, is superior in point of authenticity to any yet recorded.

A gentleman, of a robust, healthy constitution and temperate habits, twenty-four years of age, extinguished with his hands the burning clothes of his brother, who had accidentally set fire to them with sulphur, and was immediately afterwards attacked with such acute pain in both hands as to compel him to cry out for assistance. A woman, who came to his succour, observed that both hands were surrounded by a blue flame. This at first was supposed to be occasioned by the sulphur adhering to them, and an attempt was made to extinguish the flame with cold water, but without effect. The gentleman then ran down stairs to a cutler's shop, and plunged his hands into a quantity of mud: from this he derived very little relief. After suffering in this manner much torture for half an hour, he ran to the house of Dr. Richoud de Brus, by whom the case is related. On the way, both he himself and the

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\* GALEN speculated upon this subject in the following manner: Motion, he says, is *active*, sensation *passive*, and therefore a greater nervous power is necessary for the former than for the latter. There may, then, be nervous power sufficient for sensation, though not sufficient for motion; so that sensation may remain, though motion be lost. With respect to those cases in which motion remains, sensation being lost, he observes that motion is performed by nerves through the medium of muscles, but that sensation depends upon nerves distributed to the skin. Now, the nerves of the skin may be injured, and those of the muscles uninjured, and thus motion may remain though sensation be lost. When the limbs are all paralysed, the common principle is affected, and both sensation and motion are destroyed together.—EDITOR.

woman who accompanied him observed distinctly the blue flame surrounding the hands. The physician met him at the door, and observed the hands to be red, swelled, and exhaling a kind of smoke or vapor.

He immediately directed his patient to plunge his hands into a well which was opposite, and to keep them there until he experienced relief. On his doing so, the pain abated considerably, and the flame ceased; but he had not gone more than 150 paces homewards, when they reappeared. On reaching his dwelling, he immersed each of his hands in a bucket of water, which, as it got rapidly heated, he had repeatedly renewed. As often as he took them out of the water, he remarked a sort of unctuous matter flow along his fingers, and the blue flame reappeared: the latter was not however visible, except in a situation where the light of the candle was shaded, as under the table. A young gentleman, who remained in the room with him, saw the blue flame several times in the course of the night. Towards daybreak, sparks only were visible. During the succeeding day the pain was very severe; and large vesications, filled with a reddish serum, had formed on the fingers: in some places, indeed, the cuticle was entirely removed, and the cutis grayish and corroded. The vesications being opened, cerate was applied to the denuded surfaces, and the whole covered with poultices. The inflammation which followed was moderate, the suppuration healthy, and in six weeks the ulcers caused by the burning were entirely healed; but the cicatrices were very distinct, and several of the nails had dropped off.

If, observes the relater, the flame had been perceived only immediately after the burning of his brother's clothes, it might have been supposed to have resulted from some portions of burning sulphur adhering to the skin. But it resisted the effects of repeated cold affusion, and of protracted immersion in cold water; it continued all night, and was spontaneously reproduced after having been extinguished in the water of the well. It was at first so bright as to astonish those who witnessed it, and to cause the female who first saw it to say that the hands burnt like candles. Such an explanation, therefore, is quite untenable. Although, when the patient first reached my house, I only saw a kind of smoke, yet it must be remarked that I had a candle in my hand at the time, and my servant another, so that the pale light emitted by the hands may have been then present, but eclipsed by the superior light of the candles. If it was more visible on his return home, this might clearly have arisen from its being brighter, as well as the apartment darker. To what, then, should this combustion be ascribed? To hydrogen gas? But how could this gas have been generated? We admit, as probable, that the brisk excitement occasioned by the first burning caused the disengagement of phosphureted hydrogen gas, which would inflame on coming in contact with the air. Thus might be explained the trivial nature of the burns. But could we also account in this manner for the burning pain felt by the patient all the night after, for the continuance of the discharged gas, and the reproduction of the extinguished flame? Electricity does not seem to me to explain the matter any better.

The case is very analogous to one which is related in the *Nouv. Journal de Medecine* for December 1822.

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*Suspension of the Cerebral Functions from Irritation of the Stomach.* By Dr. G. B. WOOD. (Extract from the *North American Med. and Surg. Journal.*)

A partial suspension of the cerebral functions is well known to be an occa-

sional attendant upon irritation in the stomach. In some instances the symptoms so closely resemble those of diseased brain, that the physician is in some danger of mistaking the real seat of the disorder, and consequently of misapplying his remedies. We may, however, generally form a correct judgment from the preceding history of the case; and, when this cannot be ascertained, may often satisfy ourselves by observing the effects of pressure upon the epigastrium.

A young man, subject to dyspepsia, was suddenly attacked, about an hour after his evening meal, with an affection supposed to be apoplectic. When I arrived, he was lying on his back, without motion, wholly unable to see or hear, and showing no sign of sensibility, even when pretty smartly shaken. He had not fainted; for the respiration and circulation continued; and the absence of stertor, with the natural condition of the pulse, was incompatible with the notion that the disease was apoplexy. Having learned that he had eaten cucumbers and whortleberries at his tea, and that he had afterwards complained of headache with some nausea, I had little doubt that the root of the evil would be found in the stomach. An emetic was accordingly administered, which, after a much longer interval than usual, operated freely, and brought away the undigested berries and cucumbers, which were undoubtedly the cause of irritation. Sensibility was now speedily restored; and, after an attack of most violent spasm in the bowels, which was relieved by laudanum and castor oil, the patient recovered his usual health. He had never before been affected in a similar manner.

Little more than a month has passed since I was requested to visit a gentleman said to be in a dying state. I found him apparently without sensation, his eyes open and turned up, his hands clenched, and his body alternately motionless and agitated by sudden and universal tremors, which caused the bed to shake beneath him. He was a stranger, and there was no one present who could give me a history of his case. In order to explore into its nature, I placed my hand upon his epigastrium; but scarcely had I touched the skin, when he started up as though a bullet had been driven through him. Uncertain whether the coincidence might not be accidental, I repeated the experiment several times, and at each time the slightest pressure was sufficient to throw the whole frame into immediate and violent, though brief, convulsions. Sufficient evidence was thus afforded of the seat of the disease, but not of the precise nature of the irritation. As his pulse was active, I bled him freely, and immediately afterwards applied a large sinapism over the region of his stomach. Consciousness was so far restored a few minutes after the bleeding, that, upon being asked in a loud voice if he felt sickness or pain in the stomach, he nodded in the affirmative. An injection of assafetida was now administered; and, under the united influence of this remedy and the mustard plaster, he revived to some knowledge of his situation, and was able to drink very freely of warm water, which I urged upon him. This soon produced the discharge of a considerable quantity of acid liquors from his stomach, and restored him for a time to complete consciousness. He now told me that he was subject to gout, of which he had recently had an attack in his foot, but had relieved himself by bathing the affected part with hot vinegar. The nature of the case was evident. While he was yet speaking, he was seized with a sudden spasm of the stomach, which threw him into his former state; and this alternation of consciousness and insensibility was repeated several times within the course of a few minutes, each return of pain being so severe as at first to throw the

whole nervous system into violent agitation, and then to overwhelm it for a time in complete torpor. I now applied sinapisms to the feet, and gave a mixture of laudanum and the aromatic spirits of ammonia; and, at the end of about four hours from the commencement of the attack, left my patient very greatly relieved. A dose of the compound tincture of rhubarb, with a proper regulation of the diet, was afterwards sufficient to complete the cure.

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*Case of Paralysis occurring in a Child, and attended with anomalous Symptoms.*  
By J. MARSHALL PAUL, M.D. of Philadelphia. (*Ibid.*)

An anomalous form of disease occurred in a little girl at the age of three years, and continued to affect her in a greater or less degree until her death, which took place in her sixth year, at the time she was recovering from measles.

It first exhibited itself by a complete loss of power over the muscles of the back and inferior extremities, as she was riding in a carriage; and she remained in this condition for at least half an hour, during which time I saw her. She was bled several ounces from the arm; took castor oil to open the bowels, as they were costive; had frictions of different kinds applied to the spine and limbs; and in a very short time (about one hour from the period she was seized,) she had so far recovered her usual power over the affected parts, as to be able to walk about the room without assistance. This temporary affection returned the following morning, and continued to do so for several successive days. It was now more particularly confined to the right limb, and was relieved by the same remedies, with the exception of the bleeding, which did not appear to be indicated by the pulse. An interval of several weeks then elapsed, during which time the child enjoyed excellent health, and exhibited no symptom of disease whatever. At the end of this time, a recurrence of the paroxysms took place, affecting her in a similar manner and for the same length of time as in the first instance; and they then ceased, leaving her in the possession of apparent health. Thus she continued to be attacked at intervals more or less distant, though with great abatement in the violence of the disease, until the period of her death, without exhibiting any marked symptoms of a cerebral affection, if we except a slight twitching of the muscles of the eyes and face, of momentary duration, on one or two occasions, and a disposition to sleep, which was generally indulged, soon after the termination of each paroxysm. It is proper to state that there was evidently a predisposition to epilepsy in this child, accompanied by a scrofulous diathesis; as evinced by her whole appearance, and by great irritability of the nervous system. She was never able to articulate words distinctly, as all of them uttered by her were gutturals, and difficult to be understood by persons not accustomed to her manner of expressing her ideas.

She was of a very costive habit. Her appetite was generally good, and at times voracious. She had been much indulged in every variety of food, and this in large quantities. Her abdomen was mostly hard and distended; and the discharges procured by medicine from her bowels were always, at the periods of an attack, extremely vitiated and offensive.

The course of practice instituted was a total change in the child's regimen, confining her entirely to a mild vegetable and milk diet, and in moderate quantity. Gentle cathartics were frequently administered, with a view to correct the state of the bowels. Frictions to the spine and extremities were

employed; also the salt bath; and for a time a discharge was kept up from the back of the neck by means of a perpetual blister. The chief dependence, however, was placed on the laxatives; as the alimentary canal was considered to be the primary seat of the affection, although some of her symptoms might be suspected to be of cerebral origin. The attacks diminished both in frequency and force, and the disease appeared almost subdued by these remedies. Indeed, we felt strongly encouraged to indulge the hope of the patient's ultimate recovery; as the affection had become so slight towards the latter period of her life as scarcely to attract attention, or cause a momentary inconvenience to herself.

It is worthy of particular observation, under all the circumstances of this case, that the child had always been remarkably exempt from colic and other bowel affections; for it proves that extensive disease, or unnatural alteration of structure, may exist in the intestines without being indicated by any one symptom, or readily suspected by the physician. About the beginning of the present year, she took the measles, had them mildly, and bid fair to recover; when, on the morning of the day on which the last of the eruption disappeared, she was, according to her mother's account, seized with a fit, which, on inquiry, did not answer to the description of a convulsion. The child appeared greatly distressed, applied her hands to the stomach, screamed, and immediately became rigid in her limbs and body. By the time the neighbouring physician saw her, it had passed over, and she was as well as usual. Some medicines were directed, and he went away. Three or four hours afterwards, the fit returned with greater violence, and left her in a state of stupor and insensibility until her death, which took place about twelve hours afterwards.

An examination was made by Dr. J. RODMAN PAUL and myself, thirty-six hours after death. The brain presented no morbid appearance whatever: it was natural in size and texture, and uncommonly free from that turgescence of blood-vessels which is to be met with in most subjects. No effusion of any kind, either in the ventricles or between the membranes. No deviation from the natural appearance to be observed in the medulla oblongata. Stomach of the usual size, and its mucous coat healthy, except two or three small injected spots near the cardiac orifice. Liver, spleen, pancreas, and kidneys natural. In the small intestines we discovered four distinct intussusceptions, each to the extent of four or five inches. The first was found at the distance of twenty-eight inches from the pylorus; the second, fifteen inches from the first; the third, about six inches further on; and the fourth occurred eight inches from the third; all bearing a striking resemblance to each other. The intussuscepted parts were much thickened, and the caliber of the tube was considerably diminished. The muscular coat of the intestine was developed in a remarkable degree just at the contracted portions, as if nature had endeavoured to overcome the obstruction by giving it additional power. Every thing indicated that the disease was not of recent origin, but was probably coeval with the first appearance of her singular attacks; as we were struck with the unusual thinness of the parietes of the bowel above each intussusception. The mesentery was studded with enlarged glands, of the size of a split pea. No other morbid affection was observed.

I am perfectly aware that the state of the bowels, as above described, is sometimes attributed to the free use of drastic purgatives; but in this case there is not sufficient ground for adopting such an explanation, as the medi-

cines employed were mostly of a mild nature, and acted gently, without producing pain or inconvenience.

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*Delirium Tremens.* In RUST's Magazine for 1829, No. iii. Dr. SCHIRLITZ relates a fatal case of delirium tremens, with the appearance of the brain after death. It occurred in an habitual drunkard. The symptoms of the disease were well marked. The treatment consisted of the application of twelve leeches to the forehead and temples; of injections of cold water into the rectum twice a day; cold applications to the head; blisters to the nape of the neck; and every two hours one grain of calomel and one fourth of a grain of opium, with a spoonful of a mixture of infusion of Valerian and Liq. Ammon. Acet. between each dose. He died on the ninth day of the disease in "apoplectic convulsions." The skull being opened forty-eight hours after death, the dura mater was found inflamed; the vessels of the brain somewhat engorged with blood, the lateral ventricles containing about six ounces of a clear fluid. The examination was not permitted to be carried any further.

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*Compression of the Diaphragmatic and Pneumo-gastric Nerves simulating Disease of the Heart.* A female, sixty years of age, had for many years experienced a pain behind the sternum and at the base of the chest, which occurred in paroxysms. This pain, which was at first slight, augmented in intensity, preserving however its paroxysmal character, and became soon accompanied with violent palpitations of the heart, difficulty of respiration, œdema of the upper extremities, and a small pulse: in a word, with all the symptoms indicative of an obstruction to the circulation through the superior extremities. This patient remained for two years at La Pitié, during which time her chief complaints were of the pains behind the sternum, and at the lower part of the chest. For a long time she had no appetite; emaciation was extreme, and her voice was remarkably weak. The patient finally died.

On examining the body, it was discovered that the pneumo-gastric and left diaphragmatic nerves, the aorta and its branches, and the veins of the superior extremities, were surrounded in different parts of their extent by masses of a scirrhus nature, by which they were compressed, but not disorganized. The heart, which preserved its ordinary dimensions, was of a violent colour, much deeper than ordinary; its tissues also appeared softened. The lungs were healthy, with the exception of the right, which presented at its summit an excavation filled with blackish blood. In the digestive organs there was observed the commencement of atrophy; otherwise they were healthy.—*Bibliothèque Médicale.*

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#### PRACTICAL MEDICINE.

*Intermittent Fever cured by Levigated Charcoal.* The *Journal des Progres* gives three cases of intermittent fever, which Dr. PÉRQUIN cured by levigated charcoal, in doses of two drachms, mixed with water or some pleasant vehicle. A single dose seems to have been successful in each of the three cases.

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*Treatment of Hooping Cough.* (*Journal der Practischen Heilkunde.*)

Dr. RAHLEISS, who published in 1827, in Horn's Archives, a memoir upon the efficacy of the following remedies in hooping cough, after having em-

ployed them with the greatest success in more than a hundred cases, has inserted in Hufeland's Journal another article upon the same subject, for the purpose of strengthening his previous observations by his subsequent experience. The following is the form of the remedies advised.

R. Pulv. Belladonnæ gr. iv.

— Doveri gr. x.

Flor. Sulph. loti ðiv.

Pulv. Sacch. alb. 3 ij. M. et div. in ch. xx.

Dose for an infant two years old, one of these powders every three hours. Between each dose, a teaspoonful of the following mixture is to be given.

R. Infusi Anthem. ʒi.

Syrupi ʒij.

Acid. Hydrocyanici (Vauquelin) gtts. xij. M.

The proportion of the powerful ingredients which enter into these formulæ may be augmented or diminished according to the age and temperament of the child.

In concluding his memoir, M. K. observes, that sometimes the effects of these remedies are not perceptible for five or six days, but that they then become very manifest, and that, generally, in eight or twelve days at most the cure is complete. In some cases, after two or three days' employment of the remedies, an efflorescence upon the skin is perceived, and some dilatation of the pupils. The treatment must be then suspended for twenty-four or thirty-six hours, and the quantity of the belladonna diminished.

\*.\* Of the above combination of powerful remedies we have no experience. We have frequently tried the prussic acid in whooping cough, without any apparent advantage.—EDITOR.

#### SURGERY.

*Efficacy of Lemon Juice in some Diseases of the Eyes.* (From the *Journal für Chirurgie und Augenheilk.* t. xiii. cah. 2, p. 224, 1829.)

M. WERLITZ thus employs this novel remedy. He cuts a slice of lemon-peel about an inch long, and half an inch broad, places the outer part opposite the affected eye, the eyelids being opened, and by slight pressure squeezes out the little drops of volatile oil contained in the tissue of the rind into the eye. The sensation produced is acute, and continues for an hour or two. If the pain caused should be severe, cold applications are to be employed. The oil of the lemon-peel appears to increase the capillary circulation, and to cause the absorption of morbid depositions.

From experiments which have been made at La Charité at Berlin, it appears that the following diseases are remedied by this treatment: 1. Inflammations of the eye which are passing into a chronic state, and which affect the external parts, as the conjunctiva, cornea, or sclerotic, particularly if the small vessels are turgid. M. W. has also found the remedy useful in rheumatic, gonorrhœal, and scrofulous ophthalmies. 2. In pannus and pterygium. 3. In albugo, and opacity of the cornea. 4. When the texture of the cornea has lost its healthy density, and becomes soft and spongy. The remedy may be employed frequently during the day, depending upon the degree of irritation it produces. M. W. relates seven cases of cures of various diseases of the eye affected by this treatment.

*Case of severe lacerated Wound of the Rectum and Bladder.* By CHARLES HALL, M.D. of St. Alban's, Vermont.

In the month of May, 1828, I visited Charles B. Weston, of Sheldon, an industrious and respectable farmer, between fifty and sixty years of age. He had just received a most severe laceration of the rectum and bladder, occasioned by being brought to the ground with some degree of force, partially suspended by a slim staddle, which he had climbed, and by his weight had bent over, while attempting to destroy a nest of young crows, situated on a large tree standing near by. In this predicament he came to the earth, holding by his hands to the top of the small tree, his posteriors coming upon a dry beach bush, the body of which, the size of a large walkingstaff, being broken by the fall, passed, per anum, about ten inches into the abdomen, when his feet touching the ground, prevented its further progress. From this unpleasant position he with some difficulty extricated himself; and, on withdrawing the stub, his bladder emptied itself through the opening. He was brought to his house, where a few hours afterwards I saw him, in company with Dr. Judson, his family physician. There was no external laceration, the stick having passed in the natural course about two inches, where it perforated the rectum, and pierced obliquely upwards through the coats of the bladder. We were enabled to trace its course thus far with the finger. We could detect no foreign substance in this extensive wound; though, from the appearance of the broken and uneven end of the stub, we were led to suspect that some pieces of it had been left: this eventually proved, however, not to be the case. The unhappy patient experienced the most excruciating agony, and seemed to be in a hopeless condition. But nature, with the assistance of a few remedial agents, such as bloodletting, &c., performed a cure. For the first three or four days, his urine passed mostly through the wound; to prevent which, as well as to restore its natural course, recourse was had to the catheter. This, with the aid of other auxiliaries, soon restored the natural outlet, and the lacerated integuments gradually closed.

I am principally indebted to my friend Dr. Judson for the foregoing history of the case, for I saw the patient but once. The Doctor informs me that the man has recovered his accustomed health.—*American Journal of Med. Sciences.*

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*Datura Stramonium in Retention of Urine.* By WM. M. FAHNESTOCK, M.D.

The season is now rapidly approaching when persons of advanced age are very liable to retention of urine, from exposure to cold and dampness, occasioning enlargement of the prostate gland, and muscular contraction of the membranous part of the urethra; and these frequently not only produce much inconvenience to the patient, but often very considerable embarrassment to the surgeon. The great sensibility of the parts, and their peculiar conformation, render it very difficult to overcome the obstruction in the diseased state. Much of the obscurity in these cases, however, arises from the want of a perfect knowledge of the minute anatomical structure, and an accurate acquaintance with the pathological state of the gland; and particularly the augmentation of the third lobe, which presents the chief difficulty in introducing the catheter; and which, by rashness, in pursuing the plan recommended by DESAULT, of pushing the catheter forcibly onward into the bladder, is frequently so extensively injured as to become the seat of permanent irritation, form a chronic enlargement, and prove an insurmountable barrier to all



further efforts to restore it. Dr. *PHYSICK* has very ingeniously contrived a bougie-pointed catheter, which can often be insinuated when other instruments cannot be passed; but even this is not practicable at all times.

Baffled in some inveterate cases which had sustained injury by injudicious treatment, we were led to try some relaxing medications to subdue the rigidity of the parts, and have succeeded so fully in a few cases with the stramonium, that we feel anxious to recommend it to the attention of the profession.

In the fall of 1825, we were called to see P. B., *etat.* seventy-four, who by exposure to cold and wet had been suffering some days with retention of urine arising from an enlargement of the prostate gland. A variety of applications had been made, as emollients, demulcents, fomentations, ice, &c.; and great irritation had been excited by ineffectual attempts to introduce the catheter. The third lobe of the gland had been partially pierced, and become very tender: the least touch or pressure of the instrument would rupture its engorged vessels, and discharge profuse quantities of blood. The catheter was tried, but was arrested at the prostate gland; and being foiled in all our attempts with a variety of instruments, and in different positions, we ordered a large cataplasm of the leaves of the *datura stramonium*, and continued them three hours, after which we readily passed the catheter, and drew off a large quantity of urine, mixed with a dark grumous fluid. The following day we encountered the same difficulty in the introduction of the instrument, but which yielded again in a few hours after the renewal of the stramonium. The catheter was now allowed to remain two days in the passage, but excited so much pain and irritation as to oblige us to remove it before we could subdue the disease, and were again reduced to our former dilemma: by persevering, however, with constant applications of the poultices, the disease was entirely removed, and has not since returned.

Other similar cases have come under our observation, in the more advanced season, when the leaves could not be procured: under these circumstances we found a bath made of the seeds succeed admirably well. Cases attended with much pain and tenderness are very much relieved by bloodletting, and particularly by the application of leeches to the perineum.

Might not the extract of belladonna applied daily in cases of chronic enlargement, prove beneficial; or should we not expect an equally energetic operation from the *Nicotiana tabacum*? This might be tried in cases of emergency.—*Ibid.*

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*On the Removal of Diseased Joints, instead of amputating the Limb.* By M. ROUX. (*Revue Medicale.*)

From a paper lately presented to the Academy of Sciences by M. ROUX, we extract the following remarks.

M. Roux deprecates the removal of the knee-joint in cases of white swelling or other diseases. The articulation is too extensive, and its removal causes the greatest constitutional disturbance. At the express desire of a patient, he once performed the operation, but death took place on the nineteenth day. He is of opinion that, even if the life of the patient could be preserved after such an operation, the leg would be more cumbersome and useless than an artificial limb. But he strongly recommends the removal of the elbow-joint, in preference to amputation, provided the hand can be saved. At this joint he considers the operation especially advantageous, and he is

astonished that many surgeons should still prefer the amputation of the arm. By removal of the elbow-joint, which he confesses is, if not a difficult, at least a laborious task, M. Roux implies the removal of the whole of the inferior extremity of the humerus, and the upper extremity of each bone of the forearm. This operation will occupy from fifteen to twenty minutes. A very extensive wound is left, and, whatever precautions may be taken, abundant suppuration must follow, and a complete cure cannot be expected for several months. But if the limb be preserved, and restored to its functions, and if the life of the patient is not more endangered than by amputation, these inconveniences are amply compensated.

M. Roux has removed the elbow-joint four times; once in the right, and three times in the left arm. Three of the patients were men of a middle age; the fourth was a girl nineteen years old. In all, the disease of the joint, which was probably of scrofulous origin, was of a very formidable kind. There were numerous fistulous openings around the articulation, which was excessively swollen, and the operation afforded an opportunity of observing the complete fungoid degeneration of the cellular tissue, and the alteration in the structure of the bones at their articular extremities. One of these cases terminated fatally. In the other instances the cure went on favorably, but slowly; the lives of the patients were never endangered, and they regained a partial use of the limb. The young woman resumed her business as a milliner, and one of the men afterwards carried on the occupation of a grinder. The other died of consumption, with which he had been probably affected previous to the operation.

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*Polypus of the Vagina removed by the local Application of Laudanum.* In HUFELAND and OSSAN'S *Journal der Pract. Heilkunde*, February 1829, Dr. KAHLKEISS, of Gröbzig, relates this case.

A woman stated that, during three or four months, she had been subject to a discharge of blood from the vagina, continuing during the intervals of menstruation. About four weeks previously, it had increased considerably, and had greatly weakened her. The discharge was unattended with pain. Various tonic and astringent remedies were tried, without benefit. The hemorrhage increased. The patient would not submit to an examination, and was not seen by Dr. K. for eight weeks. She then returned, and informed him that, four weeks before, she had felt something pass out from the vagina suddenly, and with perceptible noise; and that, in consequence, she now experienced some inconvenience in walking. On examination, a polypus was discovered, projecting two inches from within the labia. This had no doubt been forced down during the exertions of the patient, through the very narrow opening of the hymen, which still existed in full integrity. The polypus was of a deep red colour, bled upon the slightest touch, and had a lanciform shape.

Dr. K. having often succeeded in removing nebula and leucomata from the cornea by the repeated application of the liquid laudanum of Sydenham, and once in destroying completely, by the same means, a soft bloody exerescence on the head of a little girl, was induced to make trial of it in the present case. The polypus was well wetted with the laudanum twice a day. In twenty days it was so much reduced in size as to fall within the opening of the hymen. It being no longer within reach, a canula was passed down to it, and through this was introduced a camel's hair pencil, steeped in the laudanum. In this

manner the whole of the polypus was completely destroyed by the end of the seventh month.

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*Extirpation of the Parotid Gland.* We learn, from the *Nouv. Bib. Med.* for January 1829, that M. FOUILLAY, of Brest, has extirpated a tumor of the parotid gland, regarded as cancerous, from a female aged fifty-two years, which had become painful and interfered with mastication, deglutition, and even respiration. The carotid artery was secured by a ligature at the commencement of the operation; the division of the smaller vessels did not render ligatures necessary, excepting to the internal maxillary artery. A deep and irregular wound remained, which was dressed by means of sutures. No accident supervened. The ligature from the carotid artery came away in fifteen days, and the recovery was complete in seventy-five days.

M. LARREY suggests that there was no necessity for the ligature to the carotid artery, and that securing this vessel augmented the danger of the operation. In this opinion most of our American surgeons would probably unite, as they seldom resort to this measure in any of the important operations about the face or neck.—*North American Med. and Surg. Journal.*

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*Extraction of a foreign Body from the Œsophagus.* Dr. J. B. BOILEAU succeeded in extracting a piece of copper money which was lodged in the Œsophagus, about an inch below the pharynx, where it had remained eight hours, causing much pain, and severe but ineffectual efforts to vomit. The patient could with some difficulty swallow liquids and soft aliment. Dr. B. fixed a small conical portion of compressed sponge to the extremity of a piece of whalebone, and succeeded in passing the sponge thus secured into the stomach. Here he retained it, notwithstanding the patient's efforts to vomit, some minutes, until the sponge was distended by the fluids of the stomach. The instrument was now slowly withdrawn; the sponge completely occupied the canal of the Œsophagus, and thus the foreign body was brought into the mouth with the sponge.—*Ib.*

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#### MATERIA MEDICA.

*On the Utility of Horseradish.* (*Journal Tchélouékoloubicovo Obstochestva. Journal of the Philanthropic Society of Petersburg*, No. 2, p. 194.)

In Russia, the *Cochlearia armoracia*, horseradish, is highly esteemed in cases of suppression of the menses and chlorosis. In inveterate rheumatism it is also much resorted to; and is deemed preferable to mustard or cantharides for the purpose of stimulating the cellular tissue. It is infused either in wine, beer, or water. Two drachms of scraped horseradish are to be infused in about a pint of cold liquid, for twenty-four hours, in an ordinary temperature. The half or the whole of this quantity is to be taken in small cupsful in the course of the day.

\* \* CULLEN, BERGIERS, &c. have highly extolled this remedy; and, from our own experience, we are inclined to think it is too much neglected in modern practice. It is a powerful diuretic, and very useful rubefacient.—*Ed.*

## CHEMISTRY.

*Chemical Analysis of the Ergot of Rye.* By M. C. F. MAAS, of Hamburg. (*Kastner's Archiv. für dieges. Naturlehre*, t. xviii. p. 111.)

From the experiments of this chemist, it appears that the ergot of rye does not contain hydrocyanic acid, nor morphia, nor narcotine, as has been asserted. Ammonia is detected in it, or at least a vegetable alkaline substance, which perhaps is a peculiar alkaloid. It contains no phosphoric acid, but some acetic acid. Albumen, a violet colouring matter, and an alkaline residuum, are also constituents of the ergot of rye.

## LIMERICK MEDICAL SOCIETY.

At a recent meeting of this Society, the following interesting case was read by Mr. WILKINSON, which had fallen under his care in the County Infirmary.—The patient had a fistulous opening in the upper part of the left thigh, about two inches and a half below Poupart's ligament, and about one fourth of an inch to the inside of the femoral artery. A probe, passed into the opening, ran upwards and inwards as far as the pubis, for the length of about three inches. He said his urine had been passing through this opening for the last fortnight, and that it had done so for a similar period about twelve months ago. It flowed through the natural passage in the interval. He had marks of two old sores situated above the pubis, and separated by the linea alba, the effects of an abscess which formed about eight years since, and continued running for a long time, during which two small splinters of bone had come away. At the end of three years, an abscess presented at the upper part of the thigh, the site of the present fistula; on the bursting of which, urine was discharged. He kept a sponge constantly applied to the opening at the time of his admission. When recumbent, the water flowed through the urethra, but in the erect position it gushed through the fistula in a strong narrow stream. There never had been any obstruction to the natural passage of the urine, but matter was sometimes discharged by the urethra. He remained four days in the hospital, during which time the fistula closed, without any other attention than a dressing of adhesive plaster. The water passed afterwards through the natural channel.

Dr. Wilkinson conceived the case to have originated in disease of the pubis, which exfoliated and occasioned the successive abscesses, and eventually the communication with the bladder.

A paper was read by Dr. GEARY, jun. on a new application of the Ergot of Rye. He stated several cases to prove the advantage of its employment in cases of gonorrhœa.

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 INTELLIGENCE.
 

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## ROYAL COLLEGE OF SURGEONS.

*Lectures on Anatomy and Surgery, by Professor GUTHRIE.*

THE high reputation for practical knowledge which Mr. GUTHRIE possesses, combined with his eloquent and animated style of imparting his information to others, renders these lectures unusually interesting. The subjects which

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he has already considered in the anatomical part of his course, were, first, on the Bones of the Pelvis, and on the difference between the pelvis of the various races of man, in which a comparison was drawn between them and the lower animals, and the gradation from the European downwards well illustrated. On the difference between the pelvis of the virgin and the matron, Mr. Guthrie was rather amusing, showing that, after the lapse of a couple of thousand years, the chastity of a lady might, by this rule, be doubted, that had heretofore never been suspected. The second lecture was on the Kidney, its minute structure and secretion. The third, on the Ureters and Bladder. The fourth, on the Prostate Gland, and on the side view of the Pelvis, male and female. The fifth, on the Urethra and internal parts: the whole anatomy being rendered subservient to observations on the use and proper methods of introducing instruments into the bladder. Among many points of great interest, Mr. Guthrie mentioned the occurrence of a stone sticking in the orifice of one of the ureters, (and showed the preparation,) which had been constantly felt, and the patient was to have been operated upon, if death had not prevented it. This peculiarity, combined with a tap or blow often felt on the catheter when the urine was drawn off, and which occurred from the sudden contraction of the lower and posterior part of the bladder, caused, he suspected, in some cases operations to be performed, when no stone could be discovered. The stone would be in the same state as if accumulated, and it led to the practical inference that the stone should always be felt above the wound and not below it, and that the surgeon should not be content to feel it, but he should also be certain that he could move it.

#### NEW REGULATIONS OF THE SOCIETY OF APOTHECARIES.

*Extract from Resolutions of the Court of Assistants of the Society of Apothecaries.*

Resolved: That the Society's garden at Chelsea be open every Wednesday during the months of May, June, July, August, and September, from nine o'clock in the morning until twelve at noon, and that admission be given to all such medical students as are pupils to the established professors and lecturers in the metropolis, whether upon medicine, chemistry, materia medica, or botany, and also to the apprentices of the several members of the Society.

That there be every week a demonstration of the plants contained in that department of the garden appropriated to plants belonging to the materia medica, and of such other plants as the demonstrator may think proper: such demonstration to commence at ten o'clock punctually; and that, after such demonstration is finished, there be a lecture delivered by the demonstrator in some part of the building attached to the garden, upon one or more of the following subjects, so as to form, during each summer season, a regular course of botanic study; viz.

1. The different systems of botany, both natural and artificial, particularly those of Linnæus and Jussieu.
2. The structure and growth of plants.
3. The different parts of plants, with their descriptions and uses in the process of vegetation.
4. The natural and chemical analysis of vegetable matter.
5. The medical uses of the most important articles in the materia medica, with observations on the best modes of preparing them. These remarks may

### *New Regulations of the Society of Apothecaries.* 373

be made either at the lectures or at the demonstrations, at the discretion of the lecturer.

That the conducting these demonstrations and lectures be committed to the Society's demonstrator of botany, and that the monthly lectures hitherto delivered by him at the gardens be discontinued, as merging and more effectually provided for in the lectures now proposed to be adopted.

That in order to give encouragement to diligence and talent, there be an annual examination of such students as may think proper to become candidates for the prizes intended to be given on these occasions. The examinations to be upon some or all of the subjects stated in the foregoing series of lectures, as well as upon their skill in the nomenclature of plants. No person to be admitted a candidate who has not attended these lectures and demonstrations at least eighteen days in one summer, or thirty days in two succeeding summers; nor shall any prize be awarded unless this examination be performed to the complete satisfaction of the examiner or examiners for the time being.

To prevent partiality or undue preference, no public professor or lecturer, whose pupils are admitted to the garden, can be appointed an examiner.

The apprentices to members of this Society having an annual opportunity of being candidates for prizes upon the ancient establishment, cannot be admitted candidates on these occasions, either during the period of their apprenticeship, or subsequently to the conclusion of it.

That two medals, the one being of gold, of ten guineas value, and the other of silver or bronze, be annually awarded to the two candidates who shall have passed the best and second best examination in manner hereinbefore mentioned; but no medal is to be given unless, in the opinion of the examiner or examiners, the candidates shall be deemed deserving of it.

The beadle, or some proper person, is to attend at the garden on each day of admission, to receive the visitors, and to enter or cause their names, and the names of their tutors, to be entered regularly, in a book to be provided for that purpose; and also to note therein any misconduct or breach of established regulations which may come to his knowledge during such attendance, giving information thereof to the Master and Wardens.

That the following be the regulations for the admission of students:

"It is intended that admission shall be given to all such medical students as are pupils to the established professors and lecturers in the metropolis, whether upon medicine, chemistry, materia medica, or botany; such students to apply at least three days prior, at the beadle's office, in Apothecaries' Hall, for tickets of admission for that purpose, which the Master and Wardens will grant to such persons as they may think proper.

"In order that the Master and Wardens may be enabled to exercise suitable discretion in granting such tickets, each student must leave with the beadle a letter of recommendation from his tutor, stating that such student has been attentive to his studies, and is, in his opinion, desirous of improving himself in the science of medical botany.

"That a ticket be given to each student, and that such ticket be renewed annually."

(By order,)

EDMUND BACOT, Clerk.

*Apothecaries' Hall; Feb. 1, 1830.*

## BOTANICAL LECTURES.

Mr. GILBERT BURNETT will commence his Botanical Lectures, at the Royal Institution, on the last Wednesday in April; subjects for this season: Illustrations of the Philosophy of System; of the Principles of Arrangement in Natural History in general; and of Methodical Distribution, as practically applied to the Vegetable Kingdom in particular: and in the Theatre of Anatomy, Great Windmill street, on the second Tuesday in May; which latter course will include a complete series of instruction in Physiological and Systematic Botany, with Herbarizings and Demonstrations, to ensure a knowledge of the medicinal and indigenous plants.

## HUNTERIAN MEDAL.

A gold medal, of the value of ten guineas, having been placed at the disposal of the Council of the Hunterian Society, for the best Essay on any subject selected by them, they have chosen for the current year "The Nature and History of Tubercular Formations." Essays must be delivered before the 1st of December: they must be addressed to the Secretaries; and the name of the author, with a motto corresponding with one prefixed to the essay, must be contained in a sealed packet.

The merits of the essays will be adjudged by the Council, and the prize presented at the anniversary meeting in February.

J. T. CONQUEST, } Secretaries.  
WM. COOKE, }

18, Aldermanbury; March 10, 1830.

## LITERARY NOTICE.

In the ensuing spring will be published the first Number of the "North of England Medical and Surgical Journal, and Topographical and Statistical Record," which will be continued quarterly: four Numbers will form a handsome octavo volume.

## M. CHABERT, AND HIS ANTIDOTE FOR PRUSSIC ACID, &amp;c.

Notwithstanding the repulses with which this claimant for scientific fame has recently had to contend, he still remains in the field, and bold in protestation. We did not imagine that we should again have been called upon to refer to his experiments, but as, since our last Number, he has done some deeds which have excited the attention of many, and perhaps produced conviction in a few, we are bound, as honest recorders, to state the facts of the case.

In compliance with an invitation from M. Chabert, we attended a meeting in St. James's street, about a fortnight ago. There were present a few whom we did know, and many whom nobody knew: the latter appeared, from their premature plaudits, to be very zealous in the cause. The amusements of the day commenced by M. Chabert's swallowing fifty grains of phosphorus. In the performance of this feat there was neither trick nor stratagem; the dose was fairly given, and fairly swallowed: but it is to be stated that the phosphorus was in lumps of several grains, and that, taken in this form, many hours would elapse before it would begin to produce any injurious effect. ORFILA informs us that phosphorus given in substance to animals destroys by causing an indolent inflammation of the alimentary canal. A powerful emetic would,

therefore, be the only antidote required in this case. It is true that M. Chabert offered to dine with any gentleman present, and remain with him the whole evening, to prove that he would not have recourse to an emetic for the purpose of getting rid of the material he had swallowed. The challenge for an invitation to dinner was not, however, accepted. We may remark, that phosphorus in substance has often been taken in large doses. VATER took ten grains; DESBOIS DE ROCHEFORT,\* a writer on *Materia Medica*, whose judgment ranks high on the continent, fixes the dose, *as a medicine*, from four to ten grains.† If M. Chabert will take twenty, or even ten, grains of phosphorus dissolved in oil or ether, we shall then have more confidence in the preservative powers of his antidote.

The next scene consisted in administering prussic acid to dogs; and after much delay, and various attempts to satisfy the company by very unsatisfactory and delusive experiments, the following experiment was proposed, and very unwillingly acceded to by M. Chabert, who confessed that he had no confidence in his antidote unless it were given *at the very moment the poison was placed upon the tongue of the animal*; when, in fact, the constitution would not be affected by its deleterious properties, and when, consequently, no other antidote could be required than a plentiful supply of liquid to wash it out of the mouth of the creature. This, indeed, was evidently the only object; for we particularly remarked, in his previous experiments, that M. Chabert dashed his "antidote" carelessly upon the tongue, and that he appeared quite indifferent whether any of it were swallowed or not. But to proceed: Two dogs were selected, apparently of equal strength; to one, about twelve minims of diluted prussic acid were given, which were nearly equivalent to two drops of the concentrated. The animal died in seven minutes, after having suffered from violent convulsions. The same quantity was given to the other dog; and at the expiration of thirty seconds, when the lower limbs were rigidly extended, a concerted signal was given, upon which M. Chabert administered the antidote, and frequently applied a liquid to the nostrils, which in appearance and smell resembled the aromatic spirit of ammonia. For some time the life of the animal seemed to be in much jeopardy: violent convulsions and great exhaustion ensued; but after much suffering he recovered, as much to the astonishment of M. Chabert as any body else, for he had previously declared that he did not believe the experiment would succeed, but that he would "trust to Providence, and take his chance."

Now, to us this solitary fact is far from satisfactory: in order to produce conviction in our minds, the same experiment must be repeated upon several dogs; and further, those which are to die, and those which are not to die, must be treated exactly in the same manner, with the exception of giving the antidote. We doubt very much whether the dog which was destroyed in the first experiment would not have survived, if he had been as liberally supplied with ammonia and fresh air as the second.

A few days after the meeting, a paper was sent to us for signature, in which the above experiments were related. We declined the honour of appearing in the list of M. Chabert's supporters: we remain among the *non-contentis*.

The public will shortly be edified by M. Chabert's biography. He states

\* Dict. des Sc. Med. t. xli. p. 518.

† Dr. CHRISTISON remarks, that the uncertainty and occasional severity of the operation of phosphorus have very properly expelled it from modern pharmacopœias. (*Treatise on Poisons*, p. 135.)



that he came into possession of his invaluable antidote in the following manner: In his infancy, while under the care of a priest, his curiosity was excited by observing that his tutor was much occupied in some very deep and secret study in his chamber. To these cogitations nobody was admitted; but young Chabert, like Paul Pry, put his eye to the keyhole, and ascertained that one particular bottle was frequently examined, and carefully concealed. He borrowed this mysterious bottle, and carried it to a learned chemist, who analysed the contents, and detected its composition and virtues. Why the chemist did not make use of so important a discovery for his own advantage, we know not. Chabert, still very young in age, but old in science, forthwith started on a journey to exhibit the virtues of his antidote. His success, he assures us, has been quite marvellous in every part of the globe except England.

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### MONTHLY LIST OF MEDICAL BOOKS.

*[Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]*

**Medical Botany;** or, Illustrations and Descriptions of the Medicinal Plants of the London, Edinburgh, and Dublin Pharmacopœias; with those lately introduced into Medical Practice; including a Popular and Scientific Description of Poisonous Plants, particularly those that are indigenous to Great Britain and Ireland, with Figures coloured from Nature. The whole forming a complete System of Vegetable Toxicology and Materia Medica. By JOHN STEPHENSON, M.D. F.R.S. &c. and JAMES M. CHURCHILL, F.R.S. &c. Tilt, Fleet street.—Monthly Numbers for December 1829, January, February, and March 1830.

We have but to repeat the opinion we have so frequently expressed of this elegant and useful work. The plates are excellent, and the descriptions of the various plants concise and practical.

**Sketches of the Medical Topography of the Mediterranean;** comprising an Account of Gibraltar, the Ionian Islands, and Malta: to which is prefixed, a Sketch of a Plan for Memoirs on Medical Topography. By JOHN HENNEN, M.D. F.R.S.E., Inspector of Military Hospitals, author of the "Principles of Military Surgery," &c. Edited by his Son, J. HENNEN, M.D., Mem. Roy. Med. Soc. Edin. &c.—8vo. pp. 666. Underwood, London, 1830.

Every officer, whether military or medical, who is stationed at either of the places mentioned in the titlepage, ought to be in possession of this most interesting and instructive work. These "Sketches" were originally drawn up in the form of Reports, and transmitted from time to time to the Director General of the Army Medical Department, for his information. The plan adopted by Dr. Hennen for describing the medical topography of the Mediterranean will serve as an excellent model for others who are prosecuting similar inquiries in other parts of the world. This elaborate work affords an additional proof of the indefatigable zeal, talent, and philanthropy of the late Dr. Hennen. To his son, the editor, the gratitude and approbation of the profession and the public in general are due, for the labour he has bestowed, and the ability he has shown in arranging and selecting the important materials left him by his much lamented parent.

**Observations on the existing Distinctions between Physic and Surgery;** with Remarks on the general State of the Medical Profession. By KLEIN GRANT, M.D. &c.—8vo. pp. 24. Wilson, London 1830.

The absurdity of the existing distinctions between physic and surgery is ably pointed out by Dr. Grant. He contends that both branches are so intimately interwoven, that he who does not understand both, cannot possibly understand either. As a proof that no aristocratic pride belongs

to Dr. Grant, we may quote the following just and liberal sentiment :  
"The heraldry of science admits no gradations of rank, but those which arise from intellectual superiority."

Hints for the Suppression and Extinction of Fires in Dwelling Houses, &c. and for the Preservation of Property in general from the Ravages of this destructive Element. Addressed to the Public in general, and to Fire Assurance Associations in particular. By ROBERT VENABLES, M.B.—pp. 16. Longman.

Although it is our business to check the flames of disease rather than of "fires," we may just stop to notice the proposal of Mr. Venables. He recommends that azotic or carbonic acid gas, either of which will arrest the process of combustion, should be collected in gasometers, and transferred in balloons of oiled silk or leather to the place on fire. "Once forced into an apartment or building, it would not flow off or evaporate like water, but would envelope the whole of the burning material with a non-supporting medium, and thus speedily extinguish the fire." It is worthy of observation, that these gases would not injure any species of property; while water, although it arrests the flames, destroys most of the property. One great, and indeed fatal, objection to the proposed plan, appears to have escaped Mr. Venables' notice: in most houses or buildings on fire, there is a ready admission for a large volume of atmospheric air, which would dilute and destroy the anti-combustible properties of either of the gases he recommends.

A Pocket Compendium of Anatomy, containing a correct and accurate Description of the Human Body. Second Edition. By E. W. TUSON, F.L.S. &c.—Wilson, London, 1830.

A concise and well-arranged book of reference for the anatomical student.

A Dissertation on the Influence of Heat and Humidity; with Practical Observations on the Inhalation of Iodine and various Vapours in Consumption, Catarrh, Croup, Asthma, and other Diseases. By JAMES MURRAY, M.D. &c.—8vo. pp. 305. Longman, London, 1829.

On the Nature and Treatment of the most frequent Diseases of Children; with Observations on the Management of early Infancy, Practical Remarks on the Exhibition of Opium, and on general and local Bleeding. By MILES MARLEY, F.L.S., Member of the Royal College of Surgeons.—8vo. pp. 312. Burgess and Hill, London, 1830.

Mr. Marley has given very slight sketches of most of the diseases incidental to childhood. The general contents of the book have been so frequently repeated by various writers, that their accuracy cannot be doubted. The manner in which the work is got up is creditable to the publisher.

A Treatise on Poisons, in relation to Medical Jurisprudence, Physiology, and the Practice of Physic. By ROBERT CHRISTISON, M.D., Professor of Medical Jurisprudence and Police in the University of Edinburgh, &c.—8vo. pp. 698. Black, Edinburgh; Longman, London, 1829.

We have already endeavoured to convey to our readers a general knowledge of this very important work in our Review. We shall from time to time enrich our Collectanea department with many interesting extracts from it.

Observations on the Disorders of Females connected with Uterine Irritation. By THOMAS ADDISON, M.D., Assistant Physician and Lecturer on the Theory and Practice of Physic at Guy's Hospital.—8vo. pp. 96. Highley, London, 1830.

A Letter to Sir Henry Hallford, Bart., K.C.H., President of the Royal College of Physicians, &c., touching some Points of the Evidence, and Observations of Counsel, on a Commission of Lunnacy on Mr. Edward Davies. By G. MAN BURROWS, M.D.—8vo. pp. 38. Underwood, London, 1830.

**A Vade-Mecum of Morbid Anatomy. Medical and Chirurgical; with Pathological Observations and Symptoms. Illustrated by upwards of 250 Drawings.**—8vo. pp. 51. Burgess and Hill, London, 1830.

This work must prove of great utility to practitioners and medical students, in whatever branch of the profession they may be engaged. The price of it is very moderate, considering the number and elegance of the numerous plates it contains. The arrangement is extremely convenient, either for occasional reference or regular perusal. The work contains, observations on, with illustrations of, the changes of structure found in the brain, thoracic, abdominal, and pelvic viscera, and of the organs of generation in both sexes. It likewise gives the pathological symptoms by which we judge of disease during life, and a true description of the morbid changes that are exhibited after death.

**A Treatise on Hysteria.** By GEORGE TATE, Member of the Royal College of Surgeons in London.—8vo. pp. 131. Highley, 1830.

### METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 59, High Holborn.

February	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		W inds.		Atmospheric Variations.		
			9 a.m.	Mid.	11 a.m.	9 a.m.	10 a.m.	9 a.m.	10 a.m.	9 a.m.	10 a.m.	9 a.m.	2 p.m.	10 p.m.
20			32	37	32	29.72	29.68	64	61	WNW	W	Foggy	Fine	Fine
21			35	39	30	.63	.58	63	65	W	W	Fine	Rain	Cloudy
22			35	48	34	.61	.53	65	68	WNW	SW	Foggy	Fine	Rain
23	.05	☉	48	53	47	.67	.76	70	70	WSW	WSW	Rain	Cloudy	Show'ry
24			51	55	48	.82	.97	70	69	WSW	WSW	Foggy	Fine	Fine
25			53	55	50	30.00	30.00	69	68	WSW	SW	Fine		
26			54	55	49	29.96	29.91	68	66	WSW	SW		Cloudy	Rain
27	.03		50	52	46	.92	.94	65	65	W	WSW	Fine	Fine	Cloudy
28			51	54	45	30.05	30.17	65	65	W	W	Cloudy	Cloudy	Fine
Mar.														
1		☾	50	55	49	.21	.24	65	65	W	W	Foggy	Fine	—
2			52	55	48	.23	.15	64	63	WSW	W	Fine	—	—
3			50	53	35	.08	29.91	60	58	S	S	—	—	—
4			41	40	36	29.85	.81	58	60	S	ESE	—	—	—
5			39	43	35	.90	.87	60	62	SE	ESE	—	—	—
6			40	50	32	.87	.91	62	62	ESE	ESE	—	—	—
7			36	43	35	.91	.78	63	63	E	E	—	—	—
8			41	45	40	.56	.42	64	60	E	SE	Foggy	Fine	Cloudy
9		☉	44	48	44	.54	.58	60	64	S	S	Cloudy	Sleet	Cloudy
10			47	55	45	.53	.82	67	66	S	WSW	Cloudy	Fine	Fine
11			53	57	45	.98	.88	66	65	W	WNW	Fine	—	—
12			52	59	38	30.03	30.12	63	61	WNW	W	—	—	Sleet
13			50	57	36	29.81	29.47	55	55	WNW	WSW	—	—	Fine
14			44	52	39	.34	.34	57	57	SW	SW	—	—	—
15			45	49	37	.70	.69	58	58	SW	W	—	—	—
16	.08	☾	44	55	42	.67	.89	58	60	WSW	W	—	Rain	—
17			55	56	47	30.01	30.10	60	60	W	W	Cloudy	Fine	—
18			54	59	44	.12	.04	60	57	W	WSW	Fine	—	—
19			52	60	43	.00	.07	57	56	WSW	WSW	—	—	—

The quantity of Rain cannot be given for February, on account of the frost.

### NOTICE TO CORRESPONDENTS.

*The Editor will reply to the several queries of his Birmingham friend without delay.*

*The project of Dr. G. looks well on paper, but it never can succeed in practice.*

*Communications have been received from Mr. WALLAW, Dr. and Mr. GRIFFIN.*

*Boylean Lib*

THE LONDON  
Medical and Physical Journal.

NO. 375, VOL. LXIII.]

MAY 1830.

[NO. 47, *New Series*.]

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long but an invaluable series.—*Rush*.

ORIGINAL PAPERS, AND CASES,  
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER  
AUTHENTIC SOURCES.

FUNCTIONAL DISORDERS OF THE SPINAL CORD.

*Observations on Functional Disorders of the Spinal Cord, and their Connexion with Hysterical, Nervous, and other Diseases; illustrated by Cases, selected chiefly from the Reports of the Pallas-Kenry and Currah Dispensaries.*  
By WM. GRIFFIN, M.D. and D. GRIFFIN, M.R.C.S.  
Limerick.

(Continued from page 316.)

*Respiratory System (continued).*

IN our early practice we chanced to meet with many cases of inflammatory croup, and had just reason to acknowledge its fatality when not actively treated within the first twelve hours. With this experience, it surprised us not a little to hear respectable practitioners sometimes assert that they had few or no fatal cases, and that, at almost any period of the disease, they were able to effect cures, with the very remedies which with us were totally unavailing. In the course of time, however, instances of croup fell in our own way, which, though presenting few, and often no distinctive marks from the former, terminated favorably under the mildest treatment, and occasionally without any treatment at all. As it seemed very inconclusive reasoning to say these diseases differed only in degree, when they both presented symptoms equally violent, or when, in fact, that which was sure to end favorably was sometimes the more intense of the two, we at once concluded that, although

attacking the same parts, &c., and therefore almost necessarily inducing the same symptoms, they differed altogether in their nature. Dr. Kellie agrees with his friend, Dr. Cheyne, in the opinion that, except in the circumstance of intermission, and continuance, and more or less violence of disease, there is not any real or essential difference: but is not, we may ask, regular intermission in itself a wide mark of distinction? Who would speak of intermittent and continued inflammation of any other organ of the body? Who would infer that hysteralgia and hysteritis, or spasm of the stomach and gastritis, which frequently differ only as to intermission and continuance, were but varieties of the same complaint? And surely, after all, we have the obvious fact before us, that in the very worst attacks of the one, even when neglected, patients most frequently recover; while in the mildest of the other, under the same circumstances, they almost invariably die. We wish we could offer post-mortem evidence of the different nature of these diseases, but that is exceedingly difficult to come at, and can only be obtained by the close observation and long experience of the profession at large. It seems, indeed, hardly just to demand proofs from appearances in the dead body, in diseases like those of irritation, which are so seldom fatal.

Dr. Cheyne says that, "until the advocates for the separate existence of spasmodic croup more fully assign and establish their grounds of belief, he is convinced it will be for the benefit of the patient that we should act as if there was but one kind." As the well-earned reputation of so eminent and experienced a practitioner necessarily gives great weight to any opinions he may offer, and as we feel the great importance of the distinction we have been contending for, as regards the treatment, at least in the progress of such cases,\* we shall state shortly our reasons for

\* To enumerate the dangers likely to result from assuming an identity of diseases which have many relations with one another, and yet totally differ in their nature, would seem to be quite superfluous. Perhaps it may be mentioned as not among the least, the great risk, as in cases of painful tumor of the mammae, of subjecting patients unnecessarily to distressing operations. A case of difficult respiration occurred in the Royal Infirmary of Edinburgh, some months since, apparently spasmodic, in which a surgeon of eminence resorted to the operation of tracheotomy. It was that of Elizabeth Rattray, aged thirty-two, reported in the Medical Gazette for August 22, 1829. If we may venture to judge from a short statement, we should say this was a pure case of spinal irritation, and that the palpitations, hoarseness, and difficult breathing were referrible to disordered function of the cord, from its superior part, including the origin of the pneumo-gastric nerves, to the sixth or seventh dorsal vertebra. Had an examination been made, tenderness would

inferring the existence of spasmodic croup as a distinct complaint, and offer a new reply to some queries on the subject, which Dr. Cheyne proposes to his friend, Dr. Kellie.

1. From analogy with the diseases of other organs, we may infer that affections of the nerves supplying the larynx and trachea must closely resemble organic affections of the same parts, and we necessarily suppose the nerves are sometimes the subject of disorder.

2. We can, by an effort of the will, imitate almost all the respiratory phenomena of croup.

3. We find certain cases of croup intermit suddenly, often leaving the patient perfectly free from complaint until the recurrence of the fit; a phenomenon wholly irreconcilable with the known character of inflammation.

4. We find intense cases of intermittent croup occurring as symptoms in diseases which we know are dependent upon an irritable or morbid state of the nervous system.

5. We know no distinctions of violent or mild between inflammatory and spasmodic croup, as regards symptoms: they are usually, at their onset, equally distressing, and sometimes the spasmodic is the more alarming or violent of the two. The result bears no relation to the intensity of the symptoms, and must therefore have reference altogether to some difference in the nature of the attack.

6. One is often relieved by antispasmodic remedies, the other scarcely ever; one seldom requires bloodletting, the other almost always; one is sometimes spontaneously cured, the other never.

The following are the questions proposed by Dr. Cheyne to Dr. Kellie.

have been found all along this track, the cure of which might perhaps have relieved all the distressing symptoms. That there was no chronic disease going on in the larynx or trachea, is evident from the absence of painful cough and fever, and, above all, from the relief obtained by the artificial opening, and the rapidity with which the wound was permitted to heal up. No organic disease, which had been coming on for three months, could have been benefited by the operation, or improved so much in a few days as to make it advisable to remove the tube. On the other hand, if it was looked upon as altogether a spasmodic attack, what was the value of an operation capable of affording relief only while the wound was kept open, and which, so long as the original cause remained, gave no security against a return of the oppression? We venture to assert, if the state of this patient since she left the hospital be inquired after, it will be found she has had a recurrence of the disorder, unless she has since been under medical treatment. It cannot be contended the danger of suffocation was so imminent, that, in any view, tracheotomy was requisite, as spasmodic affections of the larynx must be regarded in the same light with a somewhat similar one of the bronchial tubes in the asthmatic paroxysm, in which, however terrific the difficulty of respiration, absolute suffocation is scarcely ever known to occur.

1. Does this (Case I. in Dr. Cheyne's treatise,) appear to you to have been a case of spasmodic croup?

It seems merely necessary to answer in the affirmative, as, from observations already made, the distinctions between it and the inflammatory must be sufficiently obvious.

2. Have you ever known spasmodic croup brought on by cold?

Most frequently. In fact, diseases dependent upon disturbance or irritation of the nervous system are as readily brought on by cold as by any other cause. Spasmodic croup is in this respect precisely like spasmodic or nervous asthma, fits of which we have sometimes seen excited by cold, sometimes by disordered stomach, fatigue, or dissipation. We cannot tell why the nerves supplying the larynx or trachea should be simply disturbed in these cases by cold, any more than we can why the supra-orbital or facial branches of the fifth become affected with pain from the same cause, when inflammation would appear to be its most natural result in both.

3. Have you known the same child, at different times, affected with spasmodic and inflammatory or genuine croup?

Though we cannot immediately call to mind any such instances, we entertain no doubt of its occasional occurrence. Affections of nerves, when obstinate, sometimes lead to inflammation. Spasm of the stomach, if unrelieved, may end in gastritis; colic in enteritis; hysterical inflammation of the uterus. It must be remarked, however, that habits peculiarly disposed to spasmodic attacks, as the hysteric and nervous, seem much less liable to genuine inflammation than other constitutions. This is so generally true, that even when the appearances of local inflammation are present in hysterical or nervous persons, there is strong ground for suspecting the attack is (to adopt the usual phrase) only simulated.\* Although admitting the occasional supervention of inflammatory croup with patients labouring under the spasmodic, analogy would therefore lead us to infer that it is not a very usual occurrence, and that a child who had once been attacked with spasmodic croup was much less liable to an attack of inflammatory, we will not say than if he never had any disorder of the air-passages, but than if he had once before been affected with the last-named disease. In our own experience, we have

\* Dr. MARSHALL HALL makes many interesting remarks upon this important subject. "On some Diseases of Females," ch. vi.—EDITOR.

found children affected with spasmodic croup, very liable to a recurrence of it; much more so than those once attacked by the inflammatory are to a return of the inflammation. As it has been said the inflammation of croup, and its result, the production of a false membrane, are peculiar, and totally unlike common inflammation of any other or even of the same parts, it may perhaps be a question whether, admitting that spasmodic croup sometimes ran into the inflammatory, this is the species of inflammation that would be induced, or whether it might not rather be common laryngeal, or tracheal, or bronchial inflammation?

4. Have you ever observed spasmodic and genuine croup in the same family?

5. Do you recollect to have seen any case which you considered as spasmodic croup, pass into the genuine?

6. Did you ever, in spasmodic croup, observe difficult breathing continue after the immediate effect of the fit of croupy coughing was over?

The observations above may serve equally well as replies to the fourth and fifth questions. To the sixth we may offer Dr. Kellie's answer, that we have seen a degree of dyspnœa and short wheezing respiration in the interval of the fits.

7. Were the difficult breathing to continue, do you think it would be safe, in the cure, to trust to calomel alone?

If the difficult respiration continued, accompanied by febrile heat, we should say it was unsafe to trust to any one remedy. There is in many diseases the greatest difficulty in ascertaining whether an attack is dependent on inflammation or on nervous disturbance; and this difficulty is yet greater in croup, as it is chiefly a disease of children, in whom it is not easy to ascertain the existence of spinal tenderness. It is therefore incumbent on us, when any doubt is felt, to treat the case as inflammatory; and fortunately, in the early stages, the same remedies apply almost equally well to both. It is chiefly in the progress of spasmodic croup that mischief may be done by bleeding and depletion, and it will always sufficiently declare itself before these can be carried to a hazardous extent. We cannot agree with Dr. Mason Good, that, in the spurious attack, bloodletting, by increasing the nervous irritability, is always injurious: it does so only when employed largely or repeatedly; and, on the contrary, when cautiously done and in small quantity, we have known it allay the irritability of the system more speedily than other remedies.



8. Did you ever attend a case of spasmodic croup which terminated fatally?

Though we do not recollect ever to have seen a fatal case of spasmodic or spurious croup, we are quite convinced the disease sometimes terminates fatally. When spasm of the sphincter can prevent the flow of water from the bladder for hours, sometimes until it bursts, need we wonder that spasm of the glottis should occasionally persist until the patient is suffocated. Were examinations universally made in fatal cases of croup, we venture to predict we should soon have evidence of this termination, in the absence of the false membrane.

We have only to remark in conclusion, that there appears to be no resemblance between spasmodic croup and asthma, which could admit of their being mistaken for a moment. However croupy the respiration in asthma, and we have sometimes heard it intensely so, the patient himself is always aware, and, if old enough, will tell, that the difficulty is in the chest and not in the throat. We must also agree with Dr. Kellie in the opinion that there never exists any inflammatory action of the pulmonary organs in spasmodic croup, at least at its outset; the febrile action accompanying its accession is almost invariably dependent on nervous irritation.

We shall now speak of an affection usually attacking infants, which may be considered as a species of the spasmodic croup.

This attack is seldom attended by wheezing or croupy respiration, as if it was simply an affection of certain motory nerves constricting the larynx. Dr. Hamilton, jun. of Edinburgh, treats of it among convulsive disorders of children, and describes it as a convulsive stricture of the upper part of the windpipe, characterized by a peculiar crowing sound, quite momentary, generally happening on the child's awakening from sleep, or on taking food, or when teased or irritated. Dr. J. Clarke describes it more minutely, as characterized "by distinct attempts to fill the chest, between each of which a squeaking noise is often made; the eyes stare, and the child is evidently in great distress; the face and extremities, if the paroxysm continues long, become purple; the head is thrown backward, and the spine often bent as in opisthotonos; at length a strong expiration takes place, a fit of crying generally succeeds, and the child, evidently much exhausted, often falls asleep. Sometimes, but not frequently, in one of these attacks the infant dies."

The treatment recommended by Dr. Hamilton consists in attention to the state of the child's gums, keeping the bowels free, and applying stimulating liniments or blisters to the throat and chest; but viewing the respiratory affection, whatever its remote cause may be, as directly dependent on irritation at the origin of the eighth pair of nerves, it would seem that more advantage might be derived by directing our remedies to this point. Leeches and counter-irritation at the neck, followed by antispasmodics, or, if there was no febrile heat, by minute doses of some of the metallic oxyds, would, we have little doubt, in most instances interrupt the attack. In short, there appears to be no reason to treat it differently from similar affections in the adult depending on spinal irritation, but that in childhood, in which an extreme delicacy of organization prevails, it should be constantly held in mind that the diseases of irritation are always more serious, and more apt to be attended with danger, than in advanced life.

Dr. J. Clarke believes that this, and indeed all other convulsive affections of children, depend upon some organic affection of the brain. He details the post-mortem appearances in a few cases in illustration, and says that "all the arguments founded on the doctrine of sympathy and irritability are drawn *ab ignoto*, and it seems much more conformable to reason and observation to infer that such convulsive affections arise from some derangement of organization, however temporary, than to resort for an explanation of them to imaginary causes, and such as offer to the mind no satisfactory conclusions."

In reply to this reasoning, it may be remarked that our knowledge both of the physiology of the brain and spinal marrow, and the pathology of its many diseases, is far too obscure to allow of our drawing any inferences not warranted by established facts. It is surely more philosophical to infer change of structure only where we find it, and to suppose some other state capable of disordering the functions of parts, where we do not find it, especially when such conclusions seem strikingly confirmed by a fact that might almost suggest itself: the slowness, the imperfection, or impossibility of cure in the former; the suddenness, and perfection, and facility with which it is often accomplished in the latter. No one is so ridiculous as to suppose that *no change* takes place in functional disorder, but it would certainly seem that in such as are said to depend on irritation *no change of structure* takes place, no deranged organization: a person ascending in a balloon at a certain

height becomes oppressed in consequence of the rarity of the air, not from any change or breach in the mechanism of his frame, but because of the altered relation between that frame and the atmosphere.

We have felt it necessary to dwell a little on this subject, from a conviction of the great importance, in all disorders of the system, of distinguishing the organic from the functional. We are quite of Dr. Underwood's opinion, that, even when convulsive affections prove suddenly fatal, they are most commonly sympathetic, or dependent on irritation; and in believing this, we are treasuring up for ourselves new hopes for our remedies, and increased zeal in their application.

From all that has been said, it will not appear remarkable that irritation affecting the upper portion of the spinal column should sometimes exhibit symptoms closely resembling those of hydrophobia. In fact, hydrophobia itself, as Hufeland and Dr. Reid, of Dublin, believed, would seem to be a disease, though of a peculiar nature, whose seat is entirely in the spinal marrow, and which seems to affect the superior part, and particularly that portion of it which is allotted to the function of respiration. The manner in which it commences, and the symptoms which it gives rise to in its progress, as well as the mode of its termination and the appearances on dissection, all confirm this opinion. The pain commencing in the wound or cicatrix, and proceeding from thence to the back of the neck, and, when the wound is in the hand or arm, following, or rather falling into, the course of the spinal, accessory, or external respiratory nerve of Mr. Bell. The freedom of the intellectual functions from disorder in the commencement, the derangement of the digestive organs, loss of appetite, nausea, vomiting, constipation, and sometimes colic; the pain in the back of the neck; the difficulty of swallowing liquids, and violent spasm of the glottis, and convulsive affection of all the respiratory muscles whenever the attempt is made, and the fatal event being always the result of a failure of the action of respiration, are all symptoms which point out a derangement of the functions of nerves which have their origin at the upper portion of the spine; the exquisite acuteness of all the senses, the excessive sensibility to light and sound, and other impressions, is quite in accordance with this idea; since, if the disease commences in the upper part of the spinal marrow, it is impossible to suppose that the fifth nerve, which is so necessary to the functions of the senses, could, from the

nearness of its origin, escape being implicated. As it is a disorder that always terminates fatally, it is not at all surprising that, in the progress of it, the whole nervous system should become affected, and excessive nervous excitement, violent general convulsions, and high delirium, should, before its close, be added to the symptoms above mentioned. The appearances on dissection confirm the fact of the spine being its seat; though, from the remark we have made above on the constant fatality of its termination, it would seem that morbid anatomy cannot, except after a great number of dissections, indicate precisely that part of the nervous system where it commences; since, if the entire of this system is violently affected before its conclusion, the entire, from the intimate connexion of the whole, would probably exhibit morbid appearances. Thus it is observed that traces of inflammation are found in the brain or its membranes, in the cerebellum or its membranes, and in the membranes of the medulla spinalis. However, what is more to our purpose is, that inflammatory appearances are never found wanting in the bronchial tubes, scarcely ever in the trachea about its bifurcation, and seldom in the larynx. From all these circumstances, perhaps, it may not be too much to hope that something may yet be done in the prevention of this dreadful disorder, by early attention to the spine. Instances bearing a striking similitude to it, and occurring as symptoms of cervical irritation, will appear in subsequent papers.

We shall conclude the observations on disorder of the respiratory functions with an interesting case of spinal irritation, in which the transference of the diseased action from one set of organs to another, precisely as it shifted its seat in the cord, was remarkably obvious.

XXXII. A lady, aged forty-five, was attacked with violent headach, affecting especially the brow and forehead, and attended by violent throbbing of the temporal arteries, with flushed face and feverishness. The pain of head was dreadful at times, and usually much worse at the right than at the left side. She has been subject to it for years, though seldom to such a degree as at present, and generally gets some relief by going to bed. The attack comes on in rather a singular manner: her vision first seems suddenly dim or troubled, or the half of any object she looks at disappears. If her eyes are fixed on the window, the glass appears to move like flowing water in the sunshine; or, if engaged in reading, one half of the letters seem wanting. This is an infallible precursor of the pain, and,

as soon as it occurs, she gives up whatever employment engages her at the moment, and prepares to meet it. Her stomach soon becomes sick, and this is followed by the violent pain in the head, which continues an uncertain period, from a few hours to three or four days. Her right eye is usually affected first, but eventually both. Her general health appears good; her habit inclines to fulness. She was very ill some years since, with constant palpitation and nervous catchings or startings when in bed; oppression; pain in the chest, arms, neck, and stomach: organic disease of the heart was suspected at the time by her medical attendant; but another physician, who was consulted, treated it entirely as an hysterical affection, and she recovered under the use of mild aperients and nervines. As there was some fulness of pulse, with feverishness and excessive action of the temporal arteries, leeches were in this instance applied to the temples, which, with active purgatives, removed the attack. No examination of the cervical portion of the spine was made.

About twelve months after, we were called up in the night to this lady, who said she was dying. It appeared that, some hours after retiring to rest, she was suddenly awakened by violent palpitation, with a shooting pain in the region of the heart, extending from thence down the shoulder and arm; she started out of her sleep, pale and terrified, and felt as if she was about to die, but in a short time the pain lessened, and the palpitation began to subside. On arriving at the house, she appeared much relieved, but a feeling of languor and apprehension remained. As our attention was at this time beginning to be directed to functional affections of the cord, the cervical vertebræ were examined, but no tenderness was detected: she was treated with aperients, camphor, and other antispasmodics, but the palpitation continued to recur for several nights, though in a much less degree. As it subsided, she began to complain greatly of the back of the neck; the muscles were so sore that she could not bear the gentlest friction, nor could she turn her head or stoop without pain; there was also pain round the throat, and down either shoulder; she had uneasiness in the neck when this attack first came on, but her terror at the palpitation prevented her attending to it. She said, when examined, that the pressure was not made low enough. There was now excessive tenderness of the lowest cervical vertebra.

In the following summer, we were again summoned at midnight to visit this lady. She was awakened out of her

sleep, as on a former occasion, with a sudden fit of violent oppression, in which she thought she would have died; her breathing was shrill and stridulous, threatening imminent suffocation, exactly as in the worst cases of spasmodic croup. The paroxysm was over on our arrival, but a croupy wheezing respiration remained, and she was in much apprehension of a return of the attack. There was extreme tenderness of the first, sixth, and seventh cervical vertebræ. She speedily recovered from this distressing affection; but, after another interval of some months, was seized with pains in the hip, knee, and ankle, which came on in paroxysms of intense severity, darting down the limbs, and attacking the joints severely; there was superficial soreness of the muscles, but no increased heat, and little general feverishness. This last disorder (a true neuralgia) was readily relieved; but as, on her recovery, the patient is always unwilling to persevere in attention to the spine, or follow up any regular plan of prevention, there is no doubt but she will hereafter become the subject of some new symptoms; perhaps of comatose fits, or syncope, or a recurrence of any of the old attacks.

[To be continued.]

#### CONVULSION.

*Observations on the Convulsion incidental to Seamen from excessive Drinking.* By JAMES WALLAW, Assistant Surgeon R.N.

It is well known that one of the most frequent exciting causes of spasmodic or convulsive action, is the existence of some irritation in the primæ viæ. To give effect, however, to this exciting cause, there must, in all probability, be a predisposition to the disease in the habit of the individual. Thus, we observe that convulsive diseases are much more common in infants and children than in those further advanced in life; again, they are more common in the female than in the male; and, lastly, there are certain male constitutions infinitely more liable to them than others. Thus it is evident that a certain peculiarity of system is requisite, a certain irritability of fibre, or whatever else we may please to call it, must be in existence, to give the patient the convulsive liability; and then, either by the presence of irritating food in the stomach, or the accumulation of feculent matter in the bowels, or a vitiated state of the secretions, or any other morbid or inordinate stimulus to the first passages, the disease is instantly called into action.

Now, there prevails amongst seamen, too generally, a fondness for inebriating liquors, and it is customary with many of them, as often as an opportunity offers, to indulge to excess. This may be attributed, in some measure, to the privations which they are obliged to suffer: they are frequently for a long period, at sea, kept almost without enjoyment, and it is natural to suppose that, when they return to port, with more money in their possession than they can well dispose of, they will be led into temptation. But, whatever may be the cause or causes of the failing, it is certain that it exists, and, as a consequence, it brings upon them much misery, both in a pecuniary point of view and as regards their bodily health. They bring upon themselves, by their excesses at home and abroad, many severe maladies; and one of these is convulsion.

During a period of three years, on a station where inebriating liquors were cheap, and consequently within reach of the seamen, I had ample opportunities of witnessing the deleterious effects of drinking to excess. It was customary in that station to allow, on a particular day of the week, a certain portion of the seamen to visit their friends and acquaintances in the neighbouring ships, and as certainly as they went on that visit, so certainly did the majority of them return to their ships in a state of intoxication; some of them in a complete state of insensibility. Many, no doubt, pursued this course, to all appearance, with perfect impunity; but serious disease was the consequence to others, and to some violent convulsion or spasm was almost a sure consequence.

The disease, proceeding from this cause, in general makes its attack very suddenly. The person is, perhaps, observed to be in a state of intoxication, but no one thinks of paying him any attention, as his appearance indicates at first nothing above common drunkenness. By and by he becomes restless; if he was asleep, he becomes watchful; the countenance puts on a disturbed and anxious appearance; he wishes to shift continually from his position; and suddenly the convulsion ensues, and proceeds with such violence as to demand the help of two or three strong persons to keep the patient secure. The spasmodic action seems to exist primarily and most severely in the abdominal and thoracic muscles, extending from thence to the muscles of the neck, lower jaw, &c.; but, in fact, the whole muscular apparatus is in one violent convulsion. The limbs are agitated in every direction; attempts are made to raise the head forcibly from the ground, and as violently to strike it

back again; the teeth are gnashed together; frothy saliva flows from the mouth; the eyelids are either shut, and the pupil contracted, while the patient mutters incoherently, or they are widely opened, the pupil dilated, and the countenance has altogether a furious aspect. This excessive degree of spasm continues for probably a minute or more, when it subsides, and the patient is for a few minutes quiescent. During this period he is nearly altogether insensible, although, by rousing him, he may be made to answer questions indistinctly. Previous to the return of spasm, he again becomes restless; he then either mutters to himself, or screams aloud, or laughs sardonically; and thus does he continue, alternately quiescent and convulsed, for a period of from one to three hours (varying according to circumstances) until the system, as if fairly worn out in the struggle, becomes permanently quiescent, and sleep overtakes the unfortunate sufferer. In almost every case the pulse is quickened, and considerably fuller than natural. It rarely happens that any attempt is made to protrude the tongue during the spasm.

So far as I have observed, there is but little danger to be apprehended, either during the attack or after it. On the following day the patient, although somewhat languid and depressed, is generally able to return to his duty, and in a day or two more he is as well as if nothing had happened to him. Neither can I say, except in one case, that I have seen a repetition of the attack, except from a repetition of the exciting cause. In that particular instance, the patient had three or four attacks in the course of as many days, but none of them were to compare in violence with the first. But though the disease is not dangerous, yet it can scarcely be doubted that, by being frequently repeated, even a robust constitution would ultimately be seriously injured.

That the disease in question is produced by the inordinate quantity of stimulating fluids taken into the stomach, is evident from the circumstance that, on the station already alluded to, it was seldom met with except on the night on which the men had an opportunity of indulging. If we had an occasional case at other times, it could generally be traced to the same origin. At the same time I have reason to suppose that any irritation of mind, such as grief or anxiety, tends considerably to the production of the ailment; and I am also satisfied that indulging plentifully in bad wine has an infinitely more pernicious effect than the same indulgence in spirituous liquors. It was chiefly wine which the men, at the period I speak of, could obtain, which



wine was always of an inferior quality, frequently much acidified; in fact, almost in a state of vinous fermentation; consequently, its effects on the system generally must have been exceedingly deleterious. I therefore attribute, in a great measure, to this adulterated and decomposed wine, the prevalence of convulsion at that period; for I have never seen, either before or since, even when drunkenness has prevailed to a considerable extent, if that drunkenness was the effect of tolerably good spirits, spasmodic cases at all in the same proportion.

To prove the liability which exists in certain constitutions to the complaint, I may mention that there were a few individuals who were subjected to an attack every time they indulged: as certainly as they became intoxicated, so certainly did they suffer; others, again, had one or two attacks, and escaped ever after; others, of course, (and the majority,) escaped altogether.

The individuals evidently most disposed to the disease were the young and the robust. Between the ages of twenty and thirty-five, there were more attacked by it than either above or under that period. Those, however, who had by no means vigorous constitutions were frequently its subjects.

The treatment of the complaint is simple, and must at once be evident from the explanation already given of its exciting cause. Seeing that the convulsion is positively induced by the over-distended and stimulated state of the stomach, our first effort must be towards the unloading of that viscus. This is best done by administering half a drachm of the sulphate of zinc, or four grains of tartrate of antimony, in an ounce or two of water. After waiting fifteen or twenty minutes, if vomiting be not induced, (and be it remembered, that in these cases there is a remarkable torpidity of stomach,) we may repeat the dose, and having waited twenty minutes longer without effect, if the patient can at all bear it, the sooner we detract blood the better. Take thirty ounces of blood rapidly from the arm, and probably before the bleeding is finished, at all events very soon after, vomiting takes place. When this happens, the spasm very soon gives way. As soon as the nausea begins to appear, the attacks of spasm become both less frequent and severe, and by the time the stomach is fairly emptied, the patient is generally free from the ailment, and soon after falls asleep. It might be advisable to substitute for a part of the antimony a portion of ipecacuan, but, from its nauseous taste, the patient often refuses to swallow it: he spits

it out even after it is put into his mouth; and, indeed, it is sometimes so difficult to get him to swallow any thing, that we are obliged to give up the attempt, and have recourse to venesection alone. Besides these means, we might, in particular cases, have recourse to the warm bath, cold affusion, tobacco injection, &c. When much depression follows the attack, camphor mixture, with carbonate of ammonia, will be the most serviceable medicines.

I have sometimes thought that, by the timely application of the stomach-pump, we might in many cases prevent the attack of convulsion altogether. When we are told that a person whom we knew to be predisposed to the ailment is in a state of inebriation, would it not be advantageous to rid the stomach at once of its deleterious contents by means of this instrument? It would be nearly impossible to put the pump in use after the disease had shown itself, but previous to its accession it might be done with perfect ease. I have even thought that in all cases of excessive drunkenness, whether there was a liability to any ailment or not, this excellent instrument might be used with propriety. Might it not, therefore, be an advantageous appendage to the naval surgeon's instruments?

Before concluding, I have to observe, that at all times we ought to be cautious as to the vessel out of which we give the patient drink or medicine in this disease. Of course, we always seize the period of quiescence to offer him whatever he may have to swallow, but the convulsion frequently attacks at the moment he is drinking, and, if we are not very much on the alert indeed, the vessel is violently grasped between the teeth. I once saw a considerable portion of a glass tumbler in this way taken into the mouth, and afterwards chewed and swallowed. Fortunately in this case no serious injury was done; the lips and gums were merely slightly lacerated; but the consequences might have been worse. The best way is to give the medicine either from a horn or metal vessel, or give it by spoonful, without introducing the spoon between the teeth.

*H. M. Ship Gloucester.*

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#### DULCAMARA.

*Essays on the Uses and Properties of some Remedies.*

By JOHN GARDNER, Surgeon, &c.

##### I. DULCAMARA.

*Preliminary Observations.* THE sciences of morbid anatomy and pathology are doubtless of infinite importance to

the art of curing diseases; but the present prevailing taste disposes the student to give these subjects his attention too exclusively, and to overlook another object of inquiry of not less importance or interest, namely, the precise effects of remedies upon the body in disease. After carefully looking through the Dispensatories, and other works on *Materia Medica* and *Therapeutics*, as well as the most approved authors on *Medicine*, the conclusions are warranted that there is a great deficiency of this species of information, that the phenomena of the influences of drugs have not been minutely enough observed, their analysis ascertained, or their peculiarities discriminated. We are disposed, however, to attribute this deficiency rather to the literature of medicine, than to absolute ignorance on the part of medical men. There can be no doubt that much of the advantage experience gives to the older practitioner depends on his knowledge of the minute circumstances of the operation of remedies, and that considerations, not necessary to be discussed here, prevent him from communicating that information to the world.

The inquiries most interesting to myself are, what is the remedy for a certain symptom or train of symptoms? what the precise influence of a remedy? A large majority of cases met with in private practice call upon us to correct a disturbed function, to relieve a painful sensation, or to check a diseased action, of a kind and degree that we can confidently pronounce will not lead to fatal changes of structure, even if neglected; that nature, unassisted, will effect a cure, however slowly. But to relieve pain, and to restore the sufferer to his wonted occupations and pleasure, we must have recourse to means of cure the most rapid and effectual we possess. There are many diseases too certainly irresistibly fatal, which leave no change of structure in the body, as far as we have yet discovered; and there are also many changes of structure obvious enough, because seen in their whole progress, as in diseases of the skin and superficial glands, which are by no means on that account easier to cure.

We would not be supposed by these remarks to intend any disparagement of the study of morbid anatomy; our desire is to show that the inquiry here recommended is fully equal in importance, and not less so in interest.

In attempting to ascertain distinctly the powers of remedies, we have many and formidable difficulties to overcome, the explanation and elucidation of which would require a volume; but if we are animated by a desire to elicit truth,

rather than to establish preconceived hypotheses or hasty generalizations, these difficulties will quickly yield, and we cannot fail to be rewarded by important results: for, after all that has been done for the art of healing in ancient or modern times, this presents the most promising field for discoveries, especially to those who possess industry and zeal for their profession, more than commanding talents or genius.

The progress of the study of natural history and botany enables us to discriminate any particular object in the whole range of organized beings, and the judicious application of chemical research to them has enabled us to separate the power, as it were, of each substance from the inert materials with which in nature it is combined. When we are thus furnished with remedies in the most useful forms, we cannot know their effects on the animal body before actual experiment has been made; and when we know those effects on the healthy body, it teaches us nothing of their influences on disease: this remains a distinct subject of investigation. Some substances, absolutely inert during health, exercise remarkable powers over disease; and others, highly deleterious to the healthy body, may be administered with impunity, or even with great benefit, in many diseases. The failure of remedies to produce the same effects on diseases under every variety of circumstances, has often led to their neglect and total disuse. In some instances this may have arisen from the use of a different substance to that intended, in consequence of adulteration or the fraudulent substitution of another for it. But when every care has been taken to use the unadulterated material, the want of effect often disappoints us; the exact state of disease for which alone it is the remedy not being present. Close analogy having been mistaken for identity, the group of associated symptoms determining the place of a disease in our systems of nosology, and to which a name is given, is seldom complete or unmodified; it never indicates the constitutional state of the individual diseased, and is moreover frequently selected for reasons altogether hypothetical. Hence it has happened that nosological arrangements have retarded that minute knowledge of symptomatology required in studying the effects of remedies: and, again, the habit of generalizing, so important in other sciences, has, in this particular department, been an instrument of error; for when a variety of medicines have been observed to agree in one or two particulars of their action on the animal economy, they are arranged into classes, and we have sedatives,

diuretics, cathartics, &c. The several remedies of each class have too often been employed indiscriminately, and for the purpose of producing the effect common to the whole. In arranging medicinal agents into classes, and in studying their *modus operandi*, more hypotheses have prevailed, and more deceptive analogies have been admitted, than in any other department of medical knowledge. To illustrate the unphilosophical process of induction common in inquiries on this subject, we may relate of a celebrated teacher and author, that, in his public lectures, he condemns, in unmeasured terms, as guilty of no small crime, all those who administer medicines without knowing the principle on which they act. What he means by the *principle* on which medicines act, we learn from his own examples in explanation: Alkalies are useful in some forms of dyspepsia; the principle of this is to be explained, and for this purpose two hypotheses are had recourse to. Dyspepsia, says he, is a gastric irritation; alkalies allay this irritation; they are therefore sedatives, and must be classed as such. The error, or at least the utter inutility of this mode of reasoning, is obvious. Such principles may mislead the student, who, in the first case of dyspepsia presented to his notice, would employ alkalies: should they fail, he might be induced to abandon their use in dyspepsia altogether. In truth, every practitioner knows that there are some disturbances of the stomach, some forms of dyspepsia, for which alkalies are almost certain remedies. Instead, therefore, of merging all disturbances of the stomach into an irritation, a gastric embarrassment, or any other general term, we should endeavour to ascertain by the symptoms, minutely and accurately observed, the varieties and differences of the several kinds of these disturbances, carefully noting the symptom or symptoms pathognomic of the state of the structure, but more particularly regarding the symptom or combination of symptoms indicative of the agent that will cure the disease. This indication will, of course, depend on experience, obtained by minute observation and experiment; not made by trying a farrago of heterogeneous materials, without order or reason, but conducted on strictly philosophical principles.

In the study of remedies, it appears that, instead of paying exclusive attention to the properties in which they agree, we should endeavour to ascertain in what respect apparently similar substances differ in their action on the animal economy under disease. As, in language, words nearly synonymous have really differences of meaning, and

although in some cases they may be used indiscriminately, yet in others one cannot be substituted for another; so with respect to substances employed as remedies, each produces some peculiar effect, essentially different to the effect of every other; and the same may be asserted of every article of food, and of those subtle agents which modify the character of the air we breathe. These peculiar effects we may be permitted to denominate the specific effects of remedies, to distinguish them from those effects produced by them in common with a class to which they may belong. Thus, the influence of belladonna on the iris is its specific effect, and, as far as its use as a medical agent is concerned, is essentially different to the power of inducing sleep common to all narcotics. The specific effects of the more powerful agents are better known, because they are more quickly manifested. Of those less powerful, it often is necessary that they should be exhibited for a long period. We are not always desirous of inducing these specific effects; for almost every agent manifests two classes of effects, immediate and remote; the former usually ensured by a large dose, the latter by a long continuance of smaller doses: either of these may be the specific effect of the remedy. It is a point of no small importance in the study of the *modus operandi* of medicines, to ascertain when it is necessary that the specific effect should be produced, in order to cure any disease. In chronic diseases we believe this generally to be required. We may illustrate this by a reference to mercury: in syphilis, and some other diseases, its specific effect on the salivary glands is often necessary before the disease can be cured; in other cases we carefully avoid pushing the remedy to this result. In the case of other remedies employed in the cure of chronic diseases, we are not justified in determining their want of influence on the disease until some effect is produced on some part of the constitution, the *specific* effect of the remedy; and this will serve as an indication that the remedy has been fairly tried. We are acquainted with the true specific effects of very few substances; but that these are usually the most important *remedial* effects, will appear manifest when we consider what those are on which we rely with most confidence. Sulphur, mercury, bark, colchicum, iodine, ergot, &c.: to what general principle can we refer the peculiar influence any one of these exerts over certain diseases? We seldom, if ever, employ them for the effects they produce in common with other remedies: for example, the use of colchicum as a diuretic was long since abandoned, yet how valuable is

it in gout and rheumatism. We believe, however, that, had attention been directed to the minute circumstances attendant on those diseases, and the phenomena of the action of the remedy in other cases, their adaptation might have been much earlier known. Now, there are numberless agents possessing strong claims to our attention, the specific effects of which are altogether unknown: some which have been used formerly with great repute, and now abandoned, and others in daily use for their common and more obvious properties. This may serve in some measure to explain the extraordinary discrepancy of opinion among practitioners on the efficacy of certain remedies. Who that practises medicine does not know that there are many diseases, many painful sensations, and morbid actions, over which we have at present little or no control? yet we may justly be allowed to expect (if the foregoing remarks are well founded,) that, by well-directed research, our remedial powers will be indefinitely increased.

The principles briefly glanced at in the preceding observations are perhaps worthy of being more systematically developed and illustrated. In what follows on the subject of the properties of *dulcamara*, we have given an example of the method of studying the effects of remedies which is recommended, and in that example shown to what kind of results it is likely to lead.

*On Dulcamara.*

In 1828, I was consulted by an old lady, aged seventy-two, concerning a disease of the skin, from which she had suffered for nine months. She had no hope of being cured, but was desirous of obtaining some temporary relief. It would be impossible to assign a place in nosology to the disease. It was scaly, not in defined circumscribed patches, but continuous, with a deep red blush on the cutis beneath; an ichor constantly oozed from the surface; small vesicles might here and there be observed; frequently a crop of minute pustules, like those of *tinea capitis*; and sometimes large vesicles would rise after burning pain, simulating *erysipelas*. This horrible eruption, in one or other of these forms, covered the whole body of the patient. The smarting and itching were constant, and almost intolerable, and the burning pain recurred frequently: it was worst on the arms, legs, and thighs. The poor woman's health was, of course, much affected; she was reduced to a mere skeleton; she had totally lost her appetite, had continued thirst, and constipated bowels; was usually so chilly

as to be obliged to keep constantly near a large fire, even in summer, and seldom enjoyed an hour's sleep at night. She had been under the care of several medical men, and had tried mercury in every variety of form and degree, externally and internally; acids, bark, and other tonics; arsenic, alkalies, opium, &c.; from none of which had she experienced any relief. For some time, however, she had merely employed a liniment of oil, opium, and subacetate of lead, to sooth the irritation, and various purgatives, to obviate habitual costiveness.

I first tried the Conium, externally and internally, until it manifested its effects on the system, but without the slightest benefit to the disease. If any remedy would relieve the symptoms by its narcotic quality, why should not conium or opium? The *Solanum Dulcamara* is frequently used in skin diseases: it is classed as a narcotic, but I could find no satisfactory estimate of its powers. Mr. BRANDE, in his *Manual of Pharmacy*, says of it, "The decoction of these stalks, (the *Solanum Dulcamara*,) which should be gathered in autumn, has a bitterish sweet taste, and operates both as a narcotic and diuretic. In very large doses, it produces the usual symptoms of the narcotic poisons. I say nothing of its exhibition and doses, as it is a very uncertain and useless remedy. It has chiefly gained celebrity as an article in diet drinks, in certain cutaneous affections, and has been recommended as efficient in the relief of chronic rheumatism; but it is entitled to no manner of confidence either in these or other complaints." THOMSON says, "In large doses it produces nausea, vomiting, syncope, and palpitation. If these symptoms occur, the dose must be lessened." He does not apparently understand its properties.

Notwithstanding these unfavorable testimonies, I determined on trying it, and, carefully procuring a good specimen of the dried herb, had a decoction prepared of twice the usual strength. It was given in doses of an ounce three times a day, with a little tincture of Cardamoms, and soon produced the effects so much dreaded, namely sickness and vertigo: nevertheless, it was persisted in, and in a few days a beneficial change was taking place. The patient no longer required purgatives, as the bowels were gently moved; the appetite improved, the irritation of the skin subsided, the eruption gradually became less, and the patient was in about a month restored to perfect health. The urine was increased in quantity while the medicine was taken, and these were all the sensible effects I could discover.



The next case in which I tried the *Dulcamara*, was that of a young lady, seven years of age. I was summoned to her at midnight, and found her in a state resembling apoplexy. She had for two years suffered from an eruption of an irritable character extending over the body, with ichorous oozing behind the ears, and small pustules frequently appearing on the scalp. A surgeon of high repute had prescribed an astringent ointment, which had rapidly stopped the discharge, and the symptoms I saw speedily followed. The usual remedies, bleeding, leeches, warm baths, blisters, &c. removed the alarming symptoms, and the eruption was restored to the skin. The *Dulcamara*, given in this case in the form of a syrup made with the extract, produced the same effects as in the former instance, namely, sickness, vertigo, and gentle catharsis. The eruption was speedily and effectually cured.

These cases suggested to me that it is possible the symptoms noticed by authors as subjects of dread, namely, the sickness, vertigo, &c., produced by the *Dulcamara*, might be the index of its full influence upon the system; the mark of its specific effect upon the disease. I have since had abundant opportunities of establishing the truth of this conclusion, and I can now confidently assert that, if properly administered, the *Solanum Dulcamara* is a most effectual remedy in skin diseases, especially those attended with irritation, pustules, vesicles, scales, &c. The diseases in which I have employed it with uniform success are psoriasis, in several varieties, impetigo, eczema, and porrigo, as well as in lepra and ichthyosis. In a great number of obstinate cases of porrigo it has succeeded without any local application.

To ensure success from the use of *Dulcamara*, it is necessary that it should be collected at a proper time, and carefully dried; it should, when dry, be capable of yielding a powder of a bright green colour, and, by watery infusion, an extract possessing strongly the peculiar flavor and odour of the fresh plant. With these precautions, it may be given in the forms of powder, decoction, infusion, pills, or syrup. Perhaps it is best always to use the extract, which contains concentrated the peculiar properties of the plant; but it must always be begun in small doses, and gradually increased until sickness, vertigo, and purging are produced. For some constitutions are peculiarly susceptible to its influence, whilst others resist it until very large doses have been given. In no case have I known any benefit to the skin disease from its use, unless the symptoms of its influ-

ence on the system were produced. It is necessary, of course, when these symptoms occur, to proceed with caution, to properly diminish the dose, or lengthen the intervals of exhibiting it, in the same manner and for the same reasons as we should do with *digitalis*, or any other powerful remedy.

I may, in conclusion, remark that several cases have occurred to me where the patient has taken, by the advice of physicians, the decoction of *Dulcamara* of the *Pharmacopœia*, prepared by some celebrated chemists, for a long period, without any effect. On inspecting the decoction, it has been a pale, dirty green, thin fluid, without much odour or taste. This slovenly mode of trying any remedy, may well lead to its disuse. The decoction ought to be of a dark bottle-green colour, depositing a copious sediment as it cools, which should be shaken into the fluid, and ought, at any rate, to be given until some effect is manifested.

The next essay will be on the medical history and properties of Lead; and, notwithstanding the attention this remedy has received of late, it will be found the subject has not by any means been exhausted. It is only by subjecting every remedy to a fair scrutiny that we can hope to give precision and accuracy to this most uncertain and unsatisfactory department of medical science.

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#### TURPENTINE IN HERNIA.

*Remarks on the Use of Spirit of Turpentine in Incarcerated Hernia.* By C. B. HAMILTON, late Surgeon of the Marine Hospital at Washington City.

IN the last Number of this Journal, I have noticed a paper by Professor SEWALL,\* on the use of the spirit of turpentine internally as a remedy in incarcerated hernia. In his concluding paragraph the Professor observes, "it requires the experience derived from many cases to entitle a new remedy to confidence;" and it may be added, that a proper application of a remedy to those diseased conditions of the system in which, from analogy and reason confirmed by experience, it is found to prove beneficial, is equally necessary to sustain that confidence when it is acquired.

I have for many years used the spirit of turpentine in incarcerated hernia, without being aware that it was a new remedy, and without its being in every instance successful; for in one case in which I employed it as a dernier resort,

\* The paper referred to is contained in our Number for March last.  
—EDITOR *Lond. Med. and Phys. Journ.*

upon the patient's positively refusing to submit to an operation, no mitigation of the disease, but rather an aggravation of suffering, resulted from its exhibition. This was a case of omental inguinal hernia, and the patient died with all the symptoms of supervening mortification. That the hernial sac contained a portion of omentum only, I inferred from the bowels yielding to the operation of purgative medicine, which could not have been the case had a portion of the intestinal tube been shut up by the stricture: the stricture in this case was in the tendon forming the ring, and therefore beyond the immediate influence of a remedy applied to the stomach. Among the earlier recollections of my boyhood, is the use of the spirit of turpentine in spasmodic or flatulent colic; and a case that came under my observation when about ten years of age served to fix its use in this disease indelibly on my memory. This was a case in which an uterine inflammation succeeding to concealed abortion, in the person of a servant girl, was mistaken by her mistress for colic, and the turpentine administered with the most melancholy effect.

Being called to a case, some years ago, of strangulated scrotal hernia, of but a few hours' standing, which, from the great distention of the strangulated bowel by flatus and excrement, resisted all my efforts at reduction by taxis, I was naturally led to speculate upon the cause of so great and sudden an accumulation in the gut. It struck me that if the occluding stricture existed in the abdominal ring, it must necessarily act alike upon the descending and ascending portions of the intestine, and that, of course, nothing could be derived to the incarcerated portion from that within the abdomen, to give it the volume it possessed. It therefore occurred to me that the descending portion of the tube was free, and that the distention was caused by a stricture taking place in the muscular fibres of the ascending portion, and arresting the passage of the contents of the bowels brought down by the peristaltic motion. Considering this state of things to differ in no particular from that which takes place in spasmodic colic, I at once resolved to make trial of the turpentine, the good effects of which I had so often witnessed in the latter disease, and it succeeded beyond my most sanguine anticipations. In a few moments the contents of the strangulated bowel were spontaneously removed, and the intestine restored to the abdominal cavity by taxis, with perfect ease.

About twelve months since, I was called to a coloured man, the property of John Addison, Esq. of this district.

On my arrival, I was informed by his master that he had been for many years afflicted with scrotal hernia; that he had been in the habit of reducing it himself; that a few hours before he had been seized with severe pain in the part, and that the rupture now resisted his usual efforts to reduce it. On examining the patient, I found the scrotum so enormously enlarged that no trace of a penis could be seen; the integuments were cold to the touch, and the swelling elastic. The patient informed me that, a short time before the attack of pain, he had eaten a quantity of unripe fruit, and ascribed his situation to that cause. Without making any attempt at reduction, I inquired if there was any spirit of turpentine in the house, and fortunately about the half of a common-sized wineglassful was produced, which I immediately administered. The relief was instantaneous: the spasm was removed; the air and feces, by the elastic pressure of the intestine, were carried upwards with a gurgling sound into its continuous portion within the abdomen, and, in five minutes after, the patient with his own hand reduced the rupture.

I have made these remarks for the purpose of directing the attention of practitioners to what I consider to be the only condition of the parts, (which, by the way, might, I conceive, be properly termed a scrotal colic,) in which the turpentine proves an invaluable remedy, and to express my opinion of the impropriety of administering it in those cases where the obstruction arises from a stricture of the tendon forming the abdominal ring, or from chronic enlargement of the incarcerated viscera.\*

#### PULMONARY CONSUMPTION.

##### *Observations on Pulmonary Consumption.*

By JOSEPH PARRISH, M.D.

THE following remarks on pulmonary consumption are confined to that form of the disease which is characterised by the presence of tubercles in the lungs, and which I believe to be essentially scrofulous in its nature, and very generally dependent on hereditary predisposition. I do not intend to enter into a description of the symptoms, or into any discussion of the pathology of this formidable complaint; my object is simply to present to the medical public certain practical views, which have resulted from an experience of many years, and an observation which circumstances have strongly directed into this particular channel.

\* American Journal of Med. Sciences.

I do not, however, claim for these views the credit of originality: they are similar to those which have been taken by others, and are such as may very naturally occur to any practitioner of enlarged experience. But as different opinions are entertained by men eminent in the medical profession, the testimony of one who has seen much of the complaint may not be without utility in assisting the young physician to form a sound and enlightened judgment.

At the period of my entrance into the profession, the opinion was very prevalent that consumption was an inflammatory disease, requiring in its treatment a vigorous employment of the various antiphlogistic measures. Frequent bleedings, a rigid system of diet, confinement in rooms of a regulated temperature, with the use of local depletion and of medicines calculated to lessen the force of arterial action, constituted the plan of management then fashionable both in our hospital and in the private practice of the city. It was the course pursued and recommended by that great and distinguished physician and professor, Dr. Rush, who also conjoined with it, in many instances, the liberal use of mercury. It is right, however, to state that these measures were confined to the stage of the disease which he denominated inflammatory. In the last stage, he supposed that the degree of action was below that of health, and was accustomed to allow his patients animal food with malt liquors to fill their blood-vessels, and opiates to quiet irritation. Other practitioners, less attached to the free use of the lancet and to mercury, resorted to other measures of a different, but scarcely less energetic, character. My highly esteemed and lamented preceptor, the late Dr. Wistar, was strongly attached to digitalis, which he prescribed very freely, and, in one instance which fell under my notice, with apparently very favorable results. With these active measures, others of a milder character were united, such as blisters, issues, palliatives to allay cough, &c.; but, whichever plan was adopted, the poor patients generally went one course, and that rapidly, they died.

When I began the practice of my profession, I was much disposed to pursue the course of treatment recommended by Dr. Rush, captivated, as were nearly all who attended his instructions, by his peculiarly happy method of conveying his sentiments, and of recommending them by ingenious and forcible illustrations. The experience, however, of a few years was sufficient to convince me that a change was necessary. My doubts were, indeed, very early excited by the opposite results of two apparently very similar cases

of the disease, which occurred at the same time and in the same neighbourhood, and one of which I myself attended in consultation with Dr. Rush and another highly distinguished physician. I will relate these cases, as strongly illustrative of the inefficacy and injury of vigorous medical treatment in this complaint.

The patient whom I attended was a young man, not more than twenty-four years of age. As it was in the beginning of winter that we were called to the patient, our first object was to obviate the effects of the weather: we therefore had him placed in a spacious apartment, the air of which was maintained at a uniform temperature by night and day throughout the season. The treatment at first consisted in a system of rigid dieting, with small and frequent bleedings, and the use of mercury. Ptyalism, however, could not be induced; and, as the patient grew worse under the present plan, we laid aside the mercury, and resorted to diaphoretics. Sulphur and tarwater were also prescribed, under the impression that they had been useful in similar cases; but our remedies appeared to make no impression on the disease, which marched steadily forward. Various medicines were afterwards used, with little advantage: among the rest, acetate of lead, which was given in the dose of two grains every two hours for several days in succession, with the effect of diminishing the frequency of the pulse; but, as it induced symptoms of colic, we were under the necessity of abandoning it. At this period I visited the patient twice every day, and my two colleagues every morning; and nothing was omitted which occurred to the experience or sagacity of those highly distinguished physicians as likely to be productive of benefit. At length the stage of the disease arrived in which a supporting treatment was thought to be required. A stimulating diet, with tonics of various kinds, was now resorted to; but all our efforts were unavailing. The patient came under our care in the early part of winter, and died before the close of the following spring.

In the immediate neighbourhood of this young gentleman resided a student of medicine, afterwards a respectable practitioner. In the preceding summer, while resident pupil in the Pennsylvania hospital, he had been attacked with hæmoptysis, in the treatment of which a vigorous course of depletion had been pursued. The hæmoptysis disappeared, but was followed by considerable debility. A visit to the country did not restore his health, and he returned in the fall too unwell to resume his duties in the

hospital. At the commencement of winter, any one, upon observing the two patients, would have supposed that the student was further advanced in the disease, more reduced, and more likely to sink than his unfortunate neighbour. He was pallid, emaciated, had cough and fever; in fact, exhibited all the marks of confirmed consumption. He resisted, however, all attempts to induce him to submit to medical advice, from a belief that the practice which would be adopted would tend only to hasten a fatal issue. The winter passed with no other treatment than the occasional use of slight palliatives, as paregoric to allay cough; and the spring which saw our patient carried to the grave, opened upon this young gentleman still alive. As soon as the weather permitted, he went into the country, and furnishing himself with a horse, sick and debilitated as he was, commenced the life of a country doctor. Strange as it may appear, he rode himself into perfect health. He acquired an extensive practice, married, and became the father of several children. He afterwards returned to the city, and fell a victim to typhous fever, contracted during his attendance upon the business of the dispensary. This happened ten or twelve years after the winter above alluded to; and not a symptom of his former complaint was observable for a long time before the period of his death. I often conversed with this gentleman relative to his case, and remember being told by him that he found no remedy so effectual in relieving his distressing chilliness as a ride on horseback. In the midst of a chill, while sitting by a large fire, having the back of his chair covered by a thick coat or blanket, and yet unable to keep himself warm, he would receive a message from a patient at a distance requiring him to mount his horse. Almost immediate relief would be experienced from the exercise, and a ride of a few miles would produce so much excitement as to restore him to comfortable warmth.

A comparison of these two cases, so differently treated, and so different in their results, induced me very soon to doubt the propriety of that energetic practice to which I had before been inclined. Frequent opportunities afterwards occurred to me of witnessing the effects of rigid antiphlogistic treatment; and their almost invariably unfavorable character strengthened the suspicion of the inefficiency, and even injury, of such a course. I have repeatedly seen patients shut up in their rooms, subjected to frequent bleedings, and confined to a low diet; but I have never seen the disease yield to these measures; and a perseverance

in them has appeared to me almost always to wear out and exhaust the powers of the system, and to hasten, instead of protracting, the period of dissolution. After a long course of observation and experience, having witnessed the failure of every mode of management which consisted in the employment of active medicinal agents, or required frequent professional interference, I at length came to the conclusion that neither depletion, nor any medicine, nor any succession or combination of medicines, was equal to the cure, or even to the material alleviation of the complaint.

We hear, indeed, that phthisis is an inflammatory disease, and consequently requires the treatment which, by universal consent, is applied to other affections of this character. Rest, low diet, and depletion, will subdue inflammation: why should they not be adequate to the cure of consumption? Theory points them out as appropriate remedies; experience is a fallacious guide; obey, therefore, the dictates of reason, and if the case should terminate unfortunately, your patient will at least die *secundum artem*, and you will have this consolation, that he ought to have recovered.

But I do not believe that the condition of the lungs in tuberculous phthisis is at all analogous to ordinary inflammation, nor that it is to be treated upon similar principles. The diseased action is peculiar, and requires peculiar modes of cure. It is true that genuine inflammation may, and often does, supervene upon the proper phthisical complaint, and tends to aggravate it. It is no uncommon circumstance for consumptive patients to be attacked with catarrh, and with acute pain in some part of the thorax. In this case, moderate depletion, either general or local, together with blisters to the breast, and other antiphlogistic measures, may be employed with advantage; but they should even here be used with caution, for fear of producing a degree of debility which the system, in its diseased condition, may not be able to surmount. But, merely with the view of curing the tuberculous affection, bleeding should never be used: without diminishing the disordered action, it tends to enfeeble those vital energies which constitute the only defence against the progress of the invader.

The pulse, it is said, is strong, accelerated, and requires to be reduced; but it is a pulse of irritation, not of inflammation. Such a pulse you will often find, in hectic patients, continue to the very latest period of life, while all the other actions of the system are sunk in the lowest debility. Such a pulse I have known to be still more excited by the



repeated use of the lancet; and it is often reduced and brought down to the natural standard by a contrary plan of treatment. I recollect a case of pulmonary consumption, in which a rigid antiphlogistic diet, adhered to for some time, had of itself the effect of producing a great increase in the excitement of the pulse, which was allayed by a change to more nourishing food. The circulation even of a healthy individual may be brought into an irritated state by depriving the system of that support from a due degree of food, air, and exercise, which is essential to the preservation of a just balance in all its operations. Take a robust man, confine him in a close room, bleed him repeatedly, diet him strictly, keep up action in his bowels by purgative medicine, and allow not a breath of air to blow upon him, and, if I am not greatly mistaken, his pulse will become frequent and irritated, with the occurrence of night sweats, and perhaps sizy blood; in fact, that very condition of system will be produced, for which, in cases of phthisis, these measures are recommended as remedies. Now, it is well known that in consumptive patients there is generally a preternatural irritability; and it is reasonable to infer that this irritability must be augmented by the means which are sufficient to produce it in a healthy man; so that the system will thus be rendered less capable of resisting the operation of morbid causes, and may sink under the local disease which it might have otherwise withstood for many years, perhaps ultimately have surmounted.

But, though the antiphlogistic course of treatment, and the use of powerful medicines, are calculated rather to co-operate with the disease of the lungs in reducing the system of the consumptive patient, than to relieve or eradicate the complaint, yet we are not therefore to surrender all hope, and yield up the sufferer an unresisting victim. On the contrary, much may be done by exertion on the part of the individual affected in controlling the disease; and instances are not wanting in which it would seem to have been entirely conquered.

Vigorous exercise, and free exposure to the air, are by far the most efficient remedies in pulmonary consumption. It is not, however, that kind of exercise usually prescribed for invalids, an occasional walk or ride in pleasant weather, with strict confinement in the intervals, from which much good is to be expected. Daily and long-continued riding on horseback or in carriages over rough roads, is, perhaps, the best mode of exercise; but where this cannot

be commanded, unremitting exertion of almost any kind in the open air, amounting even to labour, will be found highly beneficial. Nor should the weather be scrupulously studied. Though I would not advise a consumptive patient to expose himself recklessly to the severest inclemencies of the weather, I would nevertheless warn him against allowing the dread of taking cold to confine him on every occasion when the temperature may be low or the skies overcast.

I may be told that the patient is often too feeble to be able to bear exertion; but, except in the last stage, where every remedy must prove unavailing, I believe there are few who cannot use exercise without doors; and it sometimes happens that they who are exceedingly debilitated find, upon making the trial, that their strength is increased by the effort, and that the more they exert themselves, the better able they are to support the exertion.

It is said by those who oppose this kind of treatment, that the lungs are in a state of inflammation, and therefore require rest. But, admitting for a moment that the tubercles in pulmonary consumption are the result of ordinary inflammatory action, of a chronic or subacute character, (an opinion, however, which I have already disclaimed,) yet the argument will not hold in the present case; for, from their very organization, the lungs cannot be at rest. From the moment we begin to breathe to the latest period of life, they are necessarily in continual motion. We cannot confine them as we can a diseased joint; and in attempting to restrain their motions by keeping the body at rest, without gaining our object, we generate a degree of irritability of system, which enables the local affection to operate upon the general health with a vast increase of deleterious effect.

I was much pleased to meet with a confirmation of my views relative to the management of pulmonary consumption, in the following extract from a work of Dr. Colin Chisholm, whose experience entitles his opinion to great respect. "An active, bustling occupation of time," he says, "with exposure to what may be called and deemed hardships, such as occur in military service during an active campaign, or in maritime service of any kind, have sometimes produced a most wonderful change in a constitution broken down by phthisis. I have known instances of officers in both services recovering their health by seemingly inconsistent means. One thing is most certain, that confinement to the atmosphere of a room, or even house, is most highly prejudicial: it renders the person in-

finitely more susceptible of the impressions of cold, and thereby tends to augment the evil which it is supposed calculated to remedy."

By relating a few instances of the good effects resulting from the mode of life above recommended, I shall perhaps be able to give greater weight to the sentiments which I have advanced. The remainder of this paper will therefore be occupied with practical illustrations of the influence of exertion on the part of the patient, in suspending or curing the complaint.

Dr. Baldwin had a strong hereditary predisposition to pulmonary consumption. He had lost a father and several brothers with the disease, and was himself attacked with it soon after he graduated. Aware of the nature of his symptoms, and convinced that fatal consequences must result unless he should depart, in his own case, from the ordinary routine of practice, he determined to try the effects of a change of climate, united with unusual bodily exertion. In the midst of winter he embarked for Savannah in Georgia. This happened at least five or six years before his death. On his arrival at Savannah, he made up his mind to travel on foot to Milledgeville, which was distant upwards of one hundred miles. His health was at this time so much impaired, that his friends at Savannah were disposed to consider him little short of a maniac. Disregarding, however, their representations, he set off on a pedestrian journey. As the country was but thinly settled, he endured many hardships and privations, being sometimes compelled to wade through streams, and often taking up his lodging in cabins, among people as untutored as the Indian, and partaking of their homely fare of ham and corn bread. Having passed the winter at the house of a friend, he found himself, upon the opening of summer, nearly restored to health. Soon afterwards, a commission appointing him naval surgeon was received, which he was induced to accept; and, having settled in the country, he remained there for several years free from disease. On the fitting-out of the expedition to the Yellowstone river, he accepted the appointment of botanist, and, having been attacked, as I was informed, by his old complaint, died upon the journey. There can be no doubt that his disease was suspended several years by the course of life which he pursued.

A young physician, who had been a pupil of my own, was, soon after entering into practice, attacked with fistula in ano, for which I operated upon him. The fistula was small, but much indisposed to heal; and a long time elapsed

before a cure was effected. Very soon afterwards he was attacked with hæmoptysis, from which he had scarcely recovered, when the symptoms of consumption became manifest. I watched the progress of the case with great solicitude. Necessity compelled him to use great exertion to gain a livelihood, and I was often surprised to find him at one time confined by an attack of spitting of blood, and a few days afterwards running about among his patients in the lanes and alleys of the city. I am convinced that his life was protracted at least one year longer than it otherwise would have been, by the great exertion to which the stimulus of necessity excited him.

Similar effects I have repeatedly witnessed in other cases. During my attendance in the Philadelphia Dispensary, my attention was occasionally attracted by patients affected with consumption, whose situation in life left them only the alternative of labouring for their support, or of becoming tenants of the Almshouse. The strong aversion entertained by many of the poor to entering the institution, serves as a powerful incentive to exertion; and I remarked that some patients, who were by this cause induced to struggle by their labour for a support to the very last, continued longer and bore their disease better than others whose circumstances were considered much more comfortable.

From a fine, healthy-looking practitioner of New England, who some years ago brought me a letter of introduction, I received the following account: In early life he had been affected with pulmonary consumption, and, while still labouring under the disease, had commenced the life of a country doctor. As there happened to be an uncommon degree of sickness in the neighbourhood at this period, he was compelled to make great and unusual exertion; and the result was a perfect restoration to health. In the course of conversation he said to me, (I copy his words,) "I have left a patient at home labouring under pulmonary consumption, with directions to ride ten miles every day, be the weather what it may." This was in the winter season.

The following notice, handed me by Dr. Gilman, was drawn up by a gentleman of Ohio, the father of the Doctor, and dated Marietta, 1823: "In the year 1804, Thaddeus M. Harris, a clergyman, gave me the following account. He had left Dorchester, Massachusetts, that spring, so low in consumption, that neither he nor any of his friends had an idea that he would be able to reach Hartford, Connecticut, distant one hundred miles. He arrived there, however; and, though still very weak, he was encouraged to

prosecute his journey to New York. When there, finding that he was gaining strength, he determined to proceed to the western country. On his arrival at Marietta, he was so well as to be able to ride forty miles a day to preach, and was in fact quite recovered. He returned to his parish in Dorchester in good health; and the last time I heard from him, which was about two years since, he was still well."

A gentleman of this city, when a young man, came under my care during the winter season, affected with cough and hectic fever. I felt great solicitude in his case, and determined to try the effect of horseback exercise. In compliance with my advice, he rode daily through the winter, and in the spring was evidently improved. The summer opened upon him still affected with alarming symptoms. It was during the late war, and in the course of the season camp Dupont was formed. The young man joined one of the volunteer companies, marched down with the rest, and was subjected to all the hardships of a camp life. His health and strength increased; and he is now a hearty man, free from all signs of pulmonary disorder.

Another very interesting case occurred to me, with a similar result. A little son of a citizen of Philadelphia was affected with cough, hectic fever, profuse sweats, and great emaciation; and there was every reason to believe that his lungs were affected with tuberculous disease. Entertaining the conviction that any active medical treatment would ensure a fatal termination to the case, I strenuously opposed the use of remedies which were pressed upon the parents by the kindness of their friends. Among the rest, mercury was proposed. Happily they were disposed to listen to the suggestions of their physician, and no active treatment was employed during the winter. At the opening of spring, the child was sent into the country, with directions that he should have the benefit of free exercise and the open air. He returned free from the pulmonary complaint, has since passed through the whooping cough, and remains well to this time.

I shall close this list of cases, by giving one more illustration of the comparative effects of exercise and of confinement in the cure of consumption. Shortly before the death of Dr. Wistar, a young lady was brought from New Jersey, to consult him for chill, fever, pain in the breast, cough, and considerable loss of voice. These symptoms presented a gloomy prospect. The Doctor being absent on a journey when the lady arrived, she came under my care;

and I had seen her several times before his return. We afterwards visited her together, and made a very minute examination of her case. Dr. Wistar, having been travelling over the mountains, in which mode of life he took great delight, was fully prepared to appreciate the effects of air and exercise. We had retired for the purpose of a consultation, and had re-entered the apartment, when, looking round the room, he made this remark to me: "Doctor, do you not think it looks confined and close here? Do you not think it would be best to send her back to the country, and direct her to ride every day?" I concurred heartily in the proposition. We put a seton in her side, and then advised her to return home, and use exercise. The winter passed over; the following summer she visited Philadelphia greatly improved in health, and, as I afterwards learned, became perfectly well.

About the same time with the above case, I attended another young lady, in consultation with a practitioner of the highest respectability in this city. The patient had been attacked with hæmoptysis, and was now labouring under hectic fever and cough. It was suggested in this case, that the disease was of an inflammatory character, and was to be encountered by depletion, low diet, and perfect rest. The last was considered a point of peculiar importance. The plan was put in operation. As the patient continued to grow worse, other remedies were tried; but were all of no avail. She died in a few months from the commencement of the treatment.

Before dismissing the subject, I would repeat my conviction that, in the management of pulmonary consumption, no remedies are so efficient as fresh air, and active, continued exercise; and that, as a general rule, all medical treatment of an energetic character had better be dispensed with. There can be no doubt that the physician may occasionally interpose palliative remedies with advantage; and symptoms often occur in the progress of the disease which require his interference; but, taking cases as they usually occur, and considering the various modes of practice which have been adopted, and are at present in use, my decided impression is, that if patients affected with phthisis were universally left to themselves, with no other medical advice than to exercise themselves freely in the open air, the general result would be a longer continuance of life, and a greater number of recoveries.

The young practitioner will often find it exceedingly difficult to carry these views into effect. The solicitude of

friends, and the anxiety of the patient himself, are seldom satisfied without the constant attendance of the physician, and are always calling for the interposition of active remedies. No little firmness is requisite to resist the suggestions and solicitations of alarmed affection, and to encounter the risk of injury to his professional reputation and prospects which may result from his apparent or supposed neglect. Even the fallacious hopes which are apt to rise in his own mind, require a strong effort of judgment to be controlled. But he will find his ultimate interests to comport with a perseverance in a course of conduct compatible with his principles. If he take the proper pains to impress his views upon the minds of those concerned, though, in the temporary excitement of suffering and alarm, they may do him injustice, they will generally, in the end, when they have discovered their error, repay him for their temporary alienation by increased confidence. In the number of those whose families I am in the habit of attending, there are none who exhibit a more entire or more affectionate reliance upon my desire and ability to aid them in sickness, than some who have at a former period, in consequence of my conscientious recommendations in consumptive cases, considered me as either unskilful or negligent, and thought themselves bound to call in the aid of other counsel. In his own breast, however, the honest physician will find the surest recompense for whatever present ill will he may incur in the discharge of his duty; and this consideration should itself be sufficient to render him firm in the course which his best judgment may dictate, though opposed to the prejudices of the uninformed, and the opinions even of those whose talents and station he may greatly respect.\*

\* Condensed from the North American Med. and Surg. Journal.

## HOSPITAL REPORTS.

## ST. BARTHOLOMEW'S HOSPITAL.

*Tapping in Hydrocephalus.*

DR. CONQUEST introduced to his class, at St. Bartholomew's Hospital, on Saturday evening, one of the two children who have been successfully tapped by him for the relief of water in the head. It having been previously intimated that the child would be brought forward, considerable interest was excited, and an unusual number of gentlemen were present. This child, a girl of about two years of age, had several signs of hydrocephalus from a date soon after its birth, and for many months past the head had gradually increased, until it acquired an enormous size. The forehead was singularly broad, and the anterior fontanelle unnaturally large. The pupils were permanently dilated; the child slept almost incessantly, and frequently had two or three frightful convulsions during the day and night. Dr. Conquest operated some time since, before a large number of the pupils of the hospital, by pushing a very beautifully constructed trocar into the right lateral ventricle. He introduced it obliquely, close to the edge of the right temporal bone, about midway between the crista galli process of the ethmoid bone and the anterior fontanelle, so as to avoid the longitudinal sinus on the one hand, and the corpus striatum on the other. The instrument entered about two inches below the scalp. An ounce and a half of bloody serum, mixed with portions of cerebrum, escaped. The pulse became feeble, and temporary collapse followed. The fluid was allowed to escape stillicidium; and, within eight and forty hours, about two pints and a half flowed out of the opening. Almost immediately after the operation, the pupils became sensible to the stimulus of light; the drowsiness was succeeded by disinclination to sleep; and the pulse, which had always before been remarkably slow, became about eighty-five. Two days after the operation, the brain evidenced signs of inflammation, with high constitutional disturbance; and great alarm was excited by a rather formidable attack of convulsions. Leeches to the temples, and the constant application of cold to the head, subdued the local inflammation, and within four and twenty hours all became tranquil. The head was well strapped, and from the cessation of cerebral excitement no unfavorable circumstance occurred.

When this interesting child was exhibited to the class, every one was struck with the improvement of its appearance, and by the intelligence and cheerfulness of its countenance. Dr. C. stated that he considered the child perfectly well, and as exhibiting a most gratifying and triumphant proof that this seemingly formidable proceeding might be safely and successfully adopted under similar circumstances.



The other case, to which the Doctor has often adverted during the winter, he operated on last autumn, assisted by Dr. HODGKIN, the talented pathologist of Guy's Hospital. Nine ounces of serum were withdrawn from the posterior fontanelle. The head became lessened six inches in its circumference, and no increase in its size has yet recurred.

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#### HOTEL DIEU.

##### *Internal Strangulation, with Gangrene and Laceration of the Ileum. General Peritonitis.\**

ALTHOUGH internal strangulations of the intestines usually bid defiance to all the resources of our art, such diseases are highly interesting in a medico-legal point of view. They frequently occur very suddenly, in the midst of the most perfect health; the patient expires in dreadful torment, vomiting until his last breath, and, in fact, presenting all the phenomena which are observed in cases of poisoning. The records of medicine contain many cases of this kind, but it is still desirable to add to the number, as from their comparative study may possibly result more satisfactory conclusions than have yet been derived.

Antoine Bernard, ætat. fifty-seven, having usually enjoyed a tolerable state of health, states that he was perfectly well on Wednesday, January 6th, when he was attacked very suddenly in the evening with violent colic, which was quickly accompanied by vomiting and repeated evacuations from the bowels. He thought his illness arose from indigestion, and was satisfied with taking some mild and warm fluid. The vomiting increased during the night, and continued without intermission for several days: no other remedies being applied but rest, strict diet, and simple ptisans. On the 9th, he was admitted into the Hôtel Dieu.

His face was shrunk, skin cold, thready and quick pulse; belly excessively painful, the weight of the bedclothes being almost insupportable; abdomen also rather tense. Bowels not open since the first day of the attack; the vomiting was almost incessant, the matter thrown up consisted of mucus mingled with feces. The moment the patient ventured to appease the distressing thirst with which he was tormented, nausea and vomiting occurred. The abdomen was covered with warm fomentations, the extremities were kept warm, and a few spoonfuls of syrup of white poppies were given. Clysters with laudanum were also administered, but were not retained.

In the evening of the following day, there was a general warmth diffused over the surface of the body, and the patient felt better. Still, however, the countenance was expressive of great anxiety; there was a sharpness about the nose, and the forehead was covered with a clammy sweat. He hiccuped incessantly, and the

\* *Lancette Française.*

exhaustion that was felt from the constant nausea led the patient to fear that his malady was incurable.

The above remedies were continued, but without advantage. The general weakness hourly increased, and on the 13th the patient was relieved from his sufferings by death. The sudden accession of symptoms which evidently depended upon mischief in the digestive organs could only be attributed to two circumstances: the introduction of poison, or a mechanical impediment to the passage of the fecal matter. There was no reason to suspect that poison had been taken, either from any thing that the patient had said, or from the existence of any special symptoms indicative of the fact. Every probability was in favor of the second supposition, and the dissection proved that it was well founded.

The body was examined about twelve hours after death. Head and chest healthy. The abdomen, although depressed, was rather sonorous on percussion. The mouth was full of yellow matter, similar to that which had been vomited during life. The peritoneum lining the abdominal muscles adhered in various parts to the intestines. In the cavity of the abdomen there were collections of pus, and the pelvis was filled with dark-looking matter, much resembling thick ink. The stomach was small in size; its mucous membrane patched with dark brown spots; the rugæ near the pyloric portion very red. The duodenum, and first half of the small intestines, were filled with yellow "bouillie," like that which the patient had vomited, the quantity of it increasing towards the large intestines. There was also some air in the small intestines, which accounted for the tympanitic appearance that had been observed. About four feet from the ileo-cæcal valve, the intestine was obstructed by an apparently fibrous band, which completely surrounded it, and held it fixed towards the vertebræ. This band was not more than fifteen or eighteen lines long, and one or two broad; it resembled a nerve both in feel and appearance; it passed from one point of the mesentery to another, forming a kind of arch, under which was contained the strangulated portion of intestine. At a short distance, the same intestine was grasped by another and similar band. At least three fourths of the caliber of the gut was closed by this accidental ligature, and thus the fecal matter had been interrupted in its passage. The interval between the two bands was about ten inches. Proceeding from the first, the caliber of the intestine was found to be much diminished, and the mucous membrane of a livid colour. About five inches lower than the first band was found a large irregular opening in the gut, with ragged, black, and fetid edges. The succeeding portion of intestine was contracted like that above, to the next point of strangulation, where the second preternatural band was found. The large intestines were somewhat contracted, and contained a small quantity of dry, well-formed feces. The other viscera healthy. The whole of the intestines were of a deep black colour. There were numerous adhesions between the different reflections

of the peritoneum, and between these adhesions were several small abscesses. The peritoneum was remarkably thin, and tore from the slightest touch.

This case shows the importance of carefully investigating the cause of death, even when no therapeutic benefit is likely to reward our trouble. In the present day no surgeon would think of opening the abdomen to destroy the mechanical cause of strangulation;\* but we may learn to distinguish these spontaneous diseases from the effects of poison, which the public are always quick to suspect when sudden symptoms are rapidly followed by death. A short time ago, Mademoiselle Hullin, of the French Opera, died under precisely similar circumstances to those related in the above case, and her death gave rise to the most unfounded suspicions, which were only allayed by the testimony of ORFILA and ROSTAN. In this case there was an adventitious band which had strangulated the ileum, and which had alone given rise to the symptoms which had been confidently attributed to poison, not only by the friends of the patient, but by the physicians who were first consulted.†

#### CHARLESTON ALMSHOUSE HOSPITAL.

*On the Use of the Pyroligneous Acid in the Treatment of Gangrene, Ulcers, and Fungus Hæmatodes. with an Account of some Cases in which it was successfully employed.*  
By THOMAS Y. SIMONS, M.D., President of the Medical Society of South Carolina, and Physician to the Alms-house Hospital, Charleston, &c.‡

THERE are two kinds of pyroligneous acid found in the apothecaries' shops: one is transparent, and, when agitated, shows small crystals floating in it; the other is dark and smoky; both have the empyreumatic odour. The former is the kind I use, and is by far the best.

When I first used this acid, I diluted it with six times its quantity of water; but since I have employed it diluted with equal parts of water, gradually diluting as the sore assumes a healthy appearance, until it becomes as weak as one twenty-fourth. It should always create a smarting sensation. The manner of applying it is to put over the ulcer some lint, which is to be kept constantly wet, and changed two or three times during the day,

\* Vide STEPHENS on Obstructed and Inflamed Hernia, and on Mechanical Obstructions of the Bowels internally, p. 125 *et seq.* Mr. S. recommends that an opening should be made into the abdomen in such cases. We confess we doubt the propriety of such an operation, but the remarks made by Mr. Stephens are worth attention.—EDITOR.

† Dr. CHRISTISON refers to this case in his Treatise on Poisons, p. 101. He states his belief that stercoraceous vomiting is never caused by poisoning, and, as this symptom occurred in the case of Mademoiselle H., Dr. C. thinks it might have been held sufficient to settle the real nature of it.—EDITOR.

‡ American Journal of Med. Sciences.

according to circumstances. The ulcer ultimately assumes red granulations resembling the inside of the pomegranate. If the acid be too strong, it will make it turn white, and assume the appearance of a slough.

CASE I. William Smith was brought into the hospital, May 9th, suffering under *Mania a potu*. After he was relieved of this disease, I observed on the anterior part of his right leg a dark spot occupying about two thirds, where a blister had been applied, as he informed me, previous to his entering the hospital. The commencement of mortification was evident, and I ordered him at first bark poultice, not having at that time the pyroligneous acid in the hospital, and the following constitutional treatment: *R. Sulph. Quinine gr. iv.; Aq. fontana ℥viii.; Acid Sulphuric gtts. xx.*; two table spoonsful to be given every two hours during the day. At night he was given two grains of Opium and five grains of Camphor. He was allowed a pint of porter and a meat diet.

This course was continued for two days, but without checking the gangrene; indeed, it was so rapidly advancing, that several physicians were of opinion that immediate amputation would be necessary.

Having, however, obtained the pyroligneous acid, I resolved to use it first: accordingly, I made free longitudinal and transverse incisions to the full depth of the gangrened portion, and then water and pyroligneous acid, in equal portions, were applied constantly in the manner already described, and the constitutional treatment was continued. In twenty-four hours a line of demarcation was formed, and in twenty-four hours more the gangrenous portion was separating from the healthy part. In seven days the whole of the gangrene was removed, and a healthy surface was presented. The acid, giving pain, was reduced to one sixth, and ultimately to one twelfth; and on the 26th September the patient was dismissed cured. The length of time of healing was produced, I think, from my omitting the acid after healthy granulations were formed, and using the adhesive straps.

CASE II. Edward Campbell, from St. John's, Berkely, South Carolina, came into the hospital on the 24th of August. He said that, about Christmas, he had bruised his shin, which he neglected. It was afterwards quacked by some old woman in the parish, until it assumed the character which I shall now describe. There was an extensive sloughing ulcer, deep, irregular, and jagged, extending from the lower portion of the tibia two thirds upwards, exposing a part of the bone which was carious, and the tendon of the extensor longus digitorum pedis. The fœtor from the ulcer was so great as to induce me to remove the patient to a place separate from the other inmates of the hospital. My patient was extremely emaciated and hectic, and I observed to the medical gentlemen and students who were present, that I had no

hopes of saving the limb, but that it was desirable to place him under constitutional treatment, so that I might improve the conservative principle of the system, (to adopt Sir G. Blane's language,) previous to my amputating the leg, and that I would apply the strongest solution of the acid, merely to correct the fœtor. The treatment was, R. Sulph. Quinine gr. vi.; Acid Sulph. gtts. xx.; Aq. fontana ℥viij.; two table-spoonsful every two hours during the day. At night, two grains of opium, to lessen irritation and procure sleep, which he had not enjoyed for some months. The diet was a pint of porter daily and beefsteak.

In two days the fœtor of the ulcer was overcome. In ten days it was much improved, and I took away a large piece of bone which had exfoliated from the tibia. In four days more I removed with the knife a considerable slough of the tendon of the extensor longus digitorum pedis. From this time the ulcer began to improve rapidly, and healthy granulations appeared.

This course was persevered in for some time with continued improvement of the leg, when my patient suffered it to be kept hanging down, causing the blood to determine and stagnate at the ulcer, when an extensive sloughing and gangrene commenced, (the acid having then been omitted,) which continued for three days, until the pure acid (the brown and smoky one having been sent me by the apothecary, which proved inert,) was obtained, which checked its progress in twenty-four hours, and removed it altogether in a week. The patient was made to keep his leg elevated, and the acid was continued until November 7th, at which time the leg had almost healed, and the acid was omitted.

CASE III. Charles Belton was brought into the hospital on the 13th of September, suffering from the effects of intemperance. I observed a red suffusion over his left thumb, with considerable tumefaction: he complained of its giving him great pain. I ordered a poultice of milk and bread. This was continued for three days, when the inflammation increased, became more painful and tumefied; a fluctuation was felt as if there was matter, and there appeared to be a disposition to point over the second articulation of the thumb. I made a free incision, when very little matter escaped, but a great quantity of blood. On the next morning, I was informed that upwards of two pounds of blood had come from the wound, although I regarded this quantity as exaggerated. I found, upon examination, the wound had all the appearances of fungus hæmatodes: it spread out on each side of the incision like a mushroom, was fungous, very vascular, and oozing blood at every part. So formidable an appearance in so short a time left little hopes of relief but in removing the diseased part, which remedy is more than equivocal as regards success. It was, however, suggested to me by a medical friend, that, as the pyroligneous acid had proved so valuable and efficacious in the other cases, whether it would not be worthy of a trial in a disease which has

generally defied the power of remedial agents. I readily consented, but with no hopes of success. The acid was applied in its strongest form, which in two days checked the hemorrhagic tendency. In fifteen days the fungous character of the wound was subdued, when lunar caustic and adhesive straps were applied, which completed the cure on the 25th of October.

During the prevalence of yellow fever in Charleston, in 1824, I gave the acid, much diluted, internally during the black-vomit stage, but with no benefit. I have no doubt it would prove salutary in putrid sorethroats as a gargle, and it would be worthy of trial in cancer, in neither of which have I yet used it.

I have drawn up these cases and observations from a conscientious conviction that a proper use of the pyroligneous acid will be the cause of saving to many human beings limbs which otherwise would be cut off, and with the anxious hope that its use among surgeons may become general.

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EDINBURGH SURGICAL HOSPITAL.

*Cases of Excision of the Elbow-joint. From the Quarterly Report, by JAMES SYME, Esq.\**

LITTLE more than a year ago, in November 1828, I cut out a carious elbow, for the first time the operation was ever performed in Great Britain. Since then I have operated in six cases. The profession, I am happy to say, seem to be satisfied with the weight of this evidence, and at least two operations of the kind have been lately performed by different practitioners in Edinburgh. Five of my cases have already been put upon record through the medium of this Journal, and I will now relate the other two.

Elizabeth Johnston, æt. fifteen, from Falkirk, entered the hospital on the 26th of August, on account of a disease of the right elbow-joint, which had existed for six months, commenced spontaneously, and increased progressively, notwithstanding the efforts of her medical attendants. It now presented a most formidable appearance, the joint being so much swelled as to measure thirteen inches in circumference, and the arm above being reduced to little more than skin and bone, which made the enlargement seem even greater than it really was. The skin over the olecranon was extensively ulcerated; and at different places, both on the front and back parts of the joint, the probe could be passed into sinuses which extended to the bones. The limb was straight, and nearly immovable. The discharge was profuse, the pain unceasing, and the irritation so great that the patient's health seemed rapidly sinking. It was plainly necessary to do something effectual for

\* Edinburgh Med. and Surg. Journal, April 1830.

her relief, and both Dr. Ballingall and I, though entertaining the most favorable opinion of excision, from what we had seen of its good effects, resolved that any operation short of amputation would be inexpedient in this case, where there was such extensive disease not only of the bones, but also of the soft parts. Being, however, very averse in general to amputating the arm for caries, and feeling particular reluctance to mutilate this unfortunate girl, who was distinguished by the most amiable disposition and interesting appearance, I delayed the operation. In the course of ten days, whether it was owing to a real improvement proceeding from the free vent which had been afforded to the matter by incisions, or was merely the effect of familiarity with the appearance of the joint, I fancied that it was not so hopeless as at first believed, and resolved to make an attempt at excision.

The operation was performed in the manner formerly described, and was attended with very little difficulty, owing to the separation of the surrounding soft parts from the articulating bones, which had been caused by collections of matter. The olecranon was greatly expanded, and, if I may use the expression, completely rotten, so that it crumbled into fragments, which were extracted piecemeal. The radius adhered to the humerus, and was extracted along with it. Before dressing the wound, I observed that the ulnar nerve was partially divided by an oblique incision, and therefore cut it completely across, to avoid the danger of such a wound; and its extremities being then placed in contact, the integuments were stitched together. The patient did extremely well; the wound healed most kindly; the swelling of the joint subsided; she gradually regained its use; and is now, I am happy to understand, restored to perfect health.\* For some time after the operation, she complained of coldness and numbness in the ulnar side of the hand, but in process of time got rid of these unpleasant symptoms, probably in consequence of reunion between the extremities of the nerve.

James Page, ætatis eight, was recommended to the Surgical Hospital by Mr. Ferguson, of Auchtermuchty, as a proper subject for excision of the elbow-joint, and was admitted on the 2d January. The right elbow was much enlarged, discoloured, and stiff. There were two sinuses opening on each side of the triceps, through which a probe could be passed to the bone. The operation was performed on January 12, in the ordinary manner. The wound healed kindly, and the patient is nearly ready to leave the hospital.

James Alexander, æt. nine, from Arbroath, entered the hospital on the 2d February, on account of a disease of the elbow-joint,

\* I was informed to-day that, her father having lately died, leaving a widow and six children in very destitute circumstances, she is able to contribute towards their support by tambouring muslin.

under which he had laboured eighteen months. The bone can be felt extensively diseased; and the case seems in all respects a favorable one for excision, which will be performed so soon as the parents are informed and give their consent.

James Dennet came from Dundee to place himself under my care on account of pain, swelling, and redness over the olecranon, which had resulted from a blow on the elbow, received several months previously. On coming to town, he was persuaded to apply to another practitioner, who made a long incision through the skin. When he at length applied to me, a small part of the wound remained open over the olecranon, where there was some swelling and much tenderness on pressure. The patient declared that he was not any better than when he left home. Finding that a probe could be passed to the bone and a little way into its substance, I concluded that a superficial caries of the olecranon was the cause of his distress, and therefore, after exposing the bone, removed the softened portion with a gouge, on the 9th January. The wound is now nearly healed, and the patient makes no complaint.\*

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*Excision of the Knee-joint.†*

The knee-joint, so far as regards its structure, is an equally favorable subject for excision with the elbow, since there is only one articulation concerned in the disease or affected by the operation, and not a number, as is the case in the wrist or ankle. But the advantages from the operation in this situation are much more questionable than in the shoulder or elbow, since not only is there much less difference between the utility of a natural leg and a wooden one, than between that of a real and artificial arm, but doubts may even be entertained as to the probability of deriving any assistance in progressive motion from the limb, which is preserved by cutting out the knee-joint. With the exception of the two cases operated upon by Mr. Park, of Liverpool, nearly fifty years ago, and the two cases lately published by Mr. Crampton, of Dublin, I am not acquainted with any recorded facts to guide us in deciding this question. Each of these gentlemen lost one of their patients, but the others survived and retained limbs so useful that the owners would not readily have exchanged them for artificial ones. Mr. Park's patient, a sailor, was able to ascend the rigging of his ship with the agility peculiar to that profession; and the woman on whom Mr. Crampton operated could walk the distance of eight or nine miles without suffering fatigue or inconvenience.

\* M. Roux has removed the elbow-joint four times. One case terminated fatally; in the others the patients were never in danger, and they regained a partial use of the limb. Vide London Med. and Phys. Journal, April 1830, p. 368.—EDITOR.

† Ibid.



The advantages attending excision of the knee-joint over amputation in the thigh, in addition to the satisfaction of saving a limb, and promoting the credit of surgery, seem to me, first, the negative one of saving the patient from the inconvenience of resting his weight upon the *face* of a stump: secondly, the positive one of preserving for him the tarsus, metatarsus, and toes, which constitute an apparatus much more efficient in protecting against the effects of concussion than any artificial one that can be constructed. Influenced by these considerations, I resolved to try the operation in some of those cases of diseased knee which so frequently result from white swelling in young subjects, and are condemned without any ceremony to amputation.

John Arnot, æt. eight, was admitted on the 1st December. His left knee was very much enlarged and immoveably bent at an acute angle with the thigh. There were two sinuses on the inner side of the joint, which allowed a probe to reach the bone. The disease resulted from a fall on the ice, and was of three years' duration. His health was broken, and he seemed devoted to speedy destruction, unless something was done for his relief.

On Monday, therefore, the 7th December, I made two incisions across the fore part of the joint, extending from one condyle of the femur to the other, meeting at their extremities, and including the patella between them. The integuments thus insulated being removed, together with the patella, which was very much diseased, I exposed the extremity of the femur, and sawed it off. In doing this, the periosteum was separated from the bone, to which it adhered very slightly for about an inch, or rather more, and I therefore thought it right to saw off another portion to this extent. The head of the tibia was next exposed, and removed by means of cutting-pliers. One of the articular arteries was tied, and we then proceeded to dress the wound; but here an unexpected difficulty occurred, owing to the hamstring muscles, which, as already stated, were much contracted, and still prevented the limb from being straightened, notwithstanding the relaxation they had suffered in consequence of the removal of the joint. I extended the limb as far as was practicable, and secured it in this position by a splint and bandage. The patient had very little constitutional disturbance, but the wound presented a dry and unpromising appearance. The tibia, from not resting in opposition to the femur, was drawn up behind that bone, distended the integuments, and threatened to exfoliate extensively. I at length succeeded, by cautious extension and counter-extension, in reducing the displaced extremities of the bones, when the limb became quite straight, and the tendency to dislocation almost entirely ceased. The cure afterwards advanced satisfactorily, notwithstanding the most vexatious opposition on the part of the patient, who was a boy of uncommon quickness, but most perverse disposition.

Four weeks after the operation, the wound was all but healed,

and the limb is now becoming every day more useful to the patient, who can already make considerable use of it in walking, though not yet provided with a high-heeled shoe.

Ann Mackintosh, æt. seven, entered the hospital on the 14th December, on account of a white swelling of the right knee, which had existed eighteen months, and was now in its last stage. There was a large sinus above the inner condyle, through which I introduced my finger into the joint, and felt it extensively diseased. Encouraged by the success of the former case, I performed a similar operation in this one on the 28th December, and think it unnecessary to mention the particulars, as they were in all respects similar to those already detailed. The articulating portions of bone removed were, as in the boy, extensively ulcerated and carious; but the soft parts were much less swelled, and less altered by the gelatinous degeneration of scrofulous action than in him; the result, therefore, was expected to be, if possible, still more satisfactory.

Great difficulty was experienced, from contraction of the hamstrings, in preventing dislocation of the bones, and the femur, so far as it was visible, presented a bare and deadlike surface, but the favorable termination of the first operation, notwithstanding appearances equally disagreeable, prevented me from abandoning my sanguine expectations of success in this instance also. On the 6th of January, in order to prevent displacement of the bones, which all our efforts hitherto had been unable to effect completely, I cut away about two inches of the femur with the cutting-pliers, and then observed, to my extreme concern, that the bone was denuded beyond the farthest extent to which my finger could reach. Amputation now seemed to afford the only chance; but, before having recourse to it, I resolved to wait a little, in the expectation of nature pointing out at what part of the limb the operation ought to be performed. On the morning of the 8th, I found her very weak: she sunk rapidly, and died at two the same day.

I do not think that the enemies of excision of the knee-joint can found any thing upon this case, since it would appear from reasoning, and has been in great measure proved by experience, that excision of a joint is less dangerous than amputation of the limb; and the only question that can be agitated in respect to the merits of the operation in this situation concerns the utility of the limb which is preserved.\*

\* M. Roux deprecates excision of the knee-joint. He performed this operation in one case; the patient died on the nineteenth day. *London Med. and Phys. Journal*, April 1830, p. 368.—EDITOR.

*Stricture of the Rectum, with Fistula in Ano opening into the Rectum.\**

ROBINA WRIGHT, admitted January 7th, three years ago began to suffer from pain in going to stool, with frequent desire to do so, and copious slimy discharge. She was then a servant in town, and up to that time had enjoyed good health.

To obtain relief from the complaints just mentioned, she entered the Royal Infirmary, and, with the exception of one week, remained there ever since (three years,) as a physician's patient.

She complained of excruciating pain on going to stool, with an almost incessant call to do so. There was a copious discharge of slimy matter from the rectum, but its solid contents were never passed of a larger size than that of a quill. To relieve her distress, she had been in the habit of taking three or four grains of opium daily, with a proportional quantity of the same introduced into the rectum. I found, on examination, a stricture of the rectum three inches from the orifice, so tight that the point of my finger could not pass through it. There was also a wide fistulous canal leading from the rectum into the vagina, and opening just within the orifice of each. Taking into account the youth of the patient, and the absence of any induration or thickening of the coats of the gut, I readily consented to attempt her cure.

I began by removing the stricture, which yielded without any difficulty to the introduction of steel bougies every third or fourth day. I then laid the fistula open, and she is now nearly well, being altogether free from pain in going to stool, and having no particular frequency of desire to do so.

The amount of relief experienced in this case can hardly be conceived by any one who had not an opportunity of seeing the patient. The agonizing pain she constantly endured was plainly depicted in her countenance, and the fetid matter incessantly escaping through the fistula into the vagina, not only rendered her existence still more wretched, but made her an insufferable nuisance to others.

\* Ibid.

## CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim  
illa, prius, cretâ; mox hæc, carbone, notamus.—PERRIUS.

*A Letter to Sir HENRY HALFORD, Bart. K.C.H., President of the Royal College of Physicians, &c., touching some Points of the Evidence and Observations of Counsel, on a Commission of Lunacy on Mr. Edward Davies. By G. MAN BURROWS, M.D.—8vo. pp. 38. London: T. and G. Underwood, 1830.*

THERE may, perhaps, be some difference of opinion as to the necessity for the publication of this letter. For our own parts, we think that Dr. BURROWS might safely have passed by the misrepresentations of newspapers, and the virulent attacks of a cross-examining advocate, with contemptuous silence. His character must be too well established in the estimation of his professional brethren to suffer aught from the garbled statements of the one, or the habitual abuse of the other, when any point is to be obtained which can tell in favor of the cause for which he is paid to plead. Dr. Burrows, however, may have felt that the public had a right to expect a refutation of the various attacks that have been made upon him respecting the evidence he gave upon the late commission *de lunatico inquirendo* on Mr. Edward Davies; and we confess it would have been difficult to withstand the temptation of giving publicity to so clear, so satisfactory, and so triumphant, an answer to his maligners, as that which is embodied in the present letter. To every impartial and disinterested man, it must be a source of much gratification to find that Dr. Burrows has not stepped in one degree from the high station he has always maintained, either as a man of moral integrity, or as a physician of much more than ordinary ability. As we are mortified when we discover that our penetration has been deceived, and our confidence consequently misplaced, so are we rejoiced to find that he whom we have always respected comes forth with untainted reputation from the assaults of malevolence and misrepresentation.

We pass over the account which Dr. Burrows gives of the coarse and systematic abuse by which he has been persecuted, and come at once to a very important part of his address, namely, the principal charges made by Mr. Brougham when commenting upon his evidence.

In the first place, it was urged by Mr. Brougham that Dr. Burrows "betrayed more the feeling of a partisan than an impartial witness, attending to give unbiassed evidence; for he was always desiring to go on his own way, without interruption."\* Now, it must be very evident that a witness in a cause may wish to go on "without interruption," not because he is either a partisan or is partial, but that his mind may not be distracted from the correct relation of the true and faithful details of the case he has to state. To this insinuation charge of Mr. Brougham's, Dr. Burrows replies that, in all commissions which he has ever attended, the commissioners have rather encouraged the medical witness to narrate his observations on the alleged lunatic, as being the best and shortest way of obtaining his evidence; and afterwards the court and counsel have examined and cross-examined him. He wished to pursue this course, but Sir Charles Wetherell, perhaps from an imperfect knowledge of the order of the facts he had to state, was, by putting questions relative to those subsequent, interrupting him, to the omission of important intervening facts. Dr. Burrows, therefore, begged permission to proceed in his own course; and in so doing, he merely followed that adopted by all the other medical witnesses.

Secondly, Mr. Brougham asserted that Dr. Burrows was mainly instrumental in sending Mr. Davies to his (Dr. Burrows') house at Clapham. This charge was unequivocally contradicted in evidence. It was clearly proved that Mr. Davies was sent to Clapham Retreat under the certificate of Mr. Lawrence and Dr. Blundell, and that Dr. Burrows was in nowise instrumental to his removal thither.

Thirdly, it was alleged by Mr. Brougham that Dr. Burrows put his name to a certificate which was to consign a fellow-citizen to a MADHOUSE, under the restraint of keepers, though, for ten days before, he had had no opportunity of knowing whether he was sane or insane. But how stands the fact? Why, it was deposed, on the oaths of Dr. Blundell and Mr. Lawrence, that the certificate of insanity which consigned Mr. Davies to a madhouse was signed by *them*, and *not* by Dr. Burrows. Mr. Brougham, indeed, chose to characterize, as a certificate of insanity by which Mr. Davies was to be sent to a *madhouse*, a note Dr. Burrows was directed to write to the master of the Fur-

\* All the extracts from Dr. Burrows' evidence, or from Mr. Brougham's speech, are taken from the shorthand writer's notes, (Mr. Gurney's.)

nival's Inn coffeehouse, to show that the bearers of it were appointed to convey Mr. D. to his *own* house at Hornsey. If so gross a misstatement of the fact arose from carelessness and inattention to the evidence on the part of Mr. Brougham, it is highly discreditable to him; for surely an advocate, however earnestly he may wish for the successful issue of his cause, ought most carefully and deliberately to weigh every particle of the evidence adduced, before he ventures upon unsupported assertions, which are calculated to injure the moral and professional reputation of any of the parties to whom he may be opposed.\*

There is one point of considerable importance upon which Dr. Burrows comments, and it is essential that the profession should be acquainted with what is required by the law upon the subject. It is quite a misconception to suppose that a medical certificate of insanity is required when a lunatic is placed *by his relations* under restraint in his own house, or is removed *by their orders* from his house to another abode, or from any place where he may have taken refuge, to his own house. "Nor has it ever been the practice, nor is it understood by the profession to be required by law, to give a certificate of insanity with a patient in any such case. But, if it be intended to remove a lunatic to a private house or lodgings, and to be there kept under the *exclusive charge and maintenance* of any one not a relative or of a committee, or to send him to an asylum or licensed house; in either of these cases a regular order must be signed by some responsible relation or friend, and after a separate examination of the patient by two medical practitioners, a form of certificate of insanity, prescribed by the Act of Parliament, must be signed by each of them. This constitutes a regular certificate, and must be transmitted with the patient."

Mr. Brougham further alleged that what occurred on Dr. Burrows' visit to Mr. Davies on the 31st of July, was not sufficient to warrant the conclusion that Mr. D. was insane on the 4th of August. Dr. Burrows, however, was prepared with irrefragable proofs of the continuance of the malady: but the legal advisers of Mr. Davies contended that these proofs were not admissible according to the rules of evidence. It is not for us to discuss the law which *prevents* a man from showing that he is perfectly innocent

\* We know that Mr. Brougham has recently expressed his deep regret that any comments made by him should have been injurious to Dr. Burrows. Mr. Brougham avers that he acted strictly according to his instructions.

of a charge which is brought against him, but it must appear to every reasonable mind that such a feature in the jurisprudence of the country calls loudly for amendment; and surely it is additionally incumbent upon an advocate, who knows that he can take advantage of so monstrous a legal technicality, to be doubly anxious not to advance any accusations which are not clearly substantiated by the evidence. To level unfounded accusations against a man who is prohibited from establishing their falsehood, is just as disgraceful as to inflict a blow upon him whose hands are manacled.

The last and most serious charge which was urged by Mr. Brougham against Dr. Burrows, was well calculated to have its intended influence with the jury. Mr. Brougham asserted that Dr. Burrows' evidence was given under the direct bias of interest; for, if Mr. Davies was found of sound mind, he would lose all the profits from retaining him in his asylum. It will scarcely be credited that Mr. Hobler, Mr. Davies' solicitor, knew Dr. Burrows had repeatedly requested that Mr. Davies might be removed from his asylum. When the day for commencing the inquiry was fixed, Mr. Davies himself declared he would not remove from Clapham Retreat, except force was used, unless he might be permitted to go, free from all control, to his house at Crouch hill. "His determination," says Dr. Burrows, "was approved by Mr. Hobler, and a strong appeal was made to me by both parties to *suffer* Mr. Davies to remain; and at length I gave a reluctant permission to his staying there till the inquiry was finished."

After all the labours of the commission, and the declamation of Mr. Brougham, it appears, from the following statement, that an erroneous verdict was returned. "The event has fully falsified the verdict. It appears that Mr. Davies has never, since that verdict was pronounced, evinced 'a sound mind,' nor been 'capable of managing himself and his affairs;' and, as the climax of this extraordinary case, he now acknowledges that he was, and still is, insane, and justifies those who have affirmed it; and has voluntarily placed himself under the care of two of the physicians who, on the inquiry, gave the strongest testimony of his existing insanity!"

We have now arrived at the termination of the very satisfactory replies which Dr. Burrows has made in answer to Mr. Brougham. Notwithstanding the provocation he has received, he indulges in no recriminative attacks upon his assailants, but with a calmness which few could have

commanded under such irritating circumstances, he very liberally endeavours to account for the extreme cruelty with which he has been treated, in the following manner:

“ However injurious the consequences of the very grave charges I have discussed, (charges which involve both my moral and professional character,) have proved to me, I am moved by no feeling of resentment against the learned counsel who has been the chief instrument in inflicting them. I cannot think it possible that a member of one liberal profession would make, in mere ‘ forensic wantonness,’ accusations against a member of another profession which, from his intimate knowledge of public feeling on all subjects relative to the insane, he must be convinced were calculated to excite a powerful prejudice against him. I verily believe that Mr. Brougham did not exceed his instructions; for I can conceive in what spirit they were drawn up. I would rather in charity suppose he believed these instructions to be true. This might justify the course of cross-examination he pursued. But, if all the charges implied to the questions he put were denied or disproved on the oath of respectable witnesses, was it his duty, was it candid, was it even humane, to embody those charges in his speech, and urge them against me as if proven?”

We cannot quit this subject without mentioning a fact which must appear very extraordinary after the unexampled severity with which Mr. Brougham had treated Dr. Burrows in the course of Mr. Davies’ case. Only a few days had elapsed after the termination of this inquiry, when Mr. Brougham was employed as counsel in a cause in the court of Delegates, in which Dr. Burrows had again to give his testimony. Upon this occasion a remarkable change was manifested in the tone and tenor of Mr. Brougham’s address; for Dr. Burrows was mentioned by him as a highly respectable physician, whose opinions were not to be doubted.

As the statements which a man makes in defence of himself are liable to suspicion, we deem it necessary to remark that every part of Dr. Burrows’ letter is confirmed by written documents, or the evidence of other persons. Enough has been said to show that a hostile party-feeling was particularly pointed at Dr. Burrows throughout the case of Mr. Davies. In a subsequent part of the letter, still more striking proofs of this fact are adduced. Every circumstance which occurred, and every comment made by counsel throughout the investigation, which was at all advantageous to Dr. Burrows, was omitted in some of the leading newspapers. In the report of Mr. Brougham’s speech in “*The Times*” of the 21st of December, a sentence was inserted, very much to the discredit of Dr.



Burrows, which had never been uttered. To prevent the repetition of the calumny, Dr. B. addressed a very proper and temperate letter to the editor, to which he did not vouchsafe to make any reply. The inference is obvious.\*

If, upon the present occasion, we have deviated from our usual custom of confining the review department of our Journal to subjects of practical interest, we are sure we shall stand excused when the motive is remembered. The duty we have performed has been gratifying to ourselves, and must be approved of by our readers. We have shown that the attempts which have been made to injure the reputation of Dr. Burrows have originated either from interested motives or misrepresentation. His ability in that particular branch of the profession to which he has of late years most especially devoted his attention, has been proved by his "Commentaries on Insanity," and is still more satisfactorily shown by the results of his practice. The proportion of the cases of insanity cured at the Clapham Retreat since its opening, is about three in four. The character and general management of this establishment may be inferred from the fact of its having been acknowledged, even by Mr. Davies' counsel, that there was no imputation on the Clapham Retreat. "During the residence of Mr. Davies in it, no similar establishment ever underwent such an ordeal; for, between the 3d of November and the 26th of December, he received above 250 visitors, most of whom went with a notion that he was not insane, and therefore looked with a jealous eye and a disposition ready to cavil at all they saw there." In every respect the triumph of Dr. Burrows is most complete, and we cannot doubt that he will meet with the cordial and zealous support of the profession and the public, as a mark of their indignation at the unworthy attempts that have been made to tarnish his reputation as a man and as a physician.

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Since the above notice of Dr. Burrows' Letter to Sir HENRY HALFORD was written, we have perused an article in the last Quarterly Review, which professes to be a review of Dr. Burrows' "Commentaries" and Dr. Haslam's "Observations on Madness." It is quite obvious that the purpose of this article was to afford the writer an opportunity of introducing his own views of Mr. Davies' case, and

\* It has subsequently been admitted by the Editor of the Times, that Dr. Burrows "has been unfairly treated."—*Times*, April 1st.

of vituperating those physicians who gave their testimony upon it. The remarks that are made upon this case evince a determined and laboured effort to pervert the facts which were substantiated by evidence. The event has proved the weakness of the writer's judgment: for Mr. Davies *is now insane*,\* and under the care of Sir George Tuthill and Dr. Haslam. When Dr. Burrows published his "Inquiry," he was lauded in the Quarterly Review as a sensible writer, and as an experienced and singularly successful practitioner in mental affections. The greater portion of this same "Inquiry" is embodied in his "Commentaries; and yet the latter work is now condemned in the Quarterly as a "wretched compilation," and it is discovered that Dr. Burrows lacks talent for the task he had imposed upon himself. Whence proceeds this extraordinary change of opinion? It cannot be supposed that the abilities of Dr. Burrows have declined with his years and extended experience. We deeply lament the explanation we have to offer of the total change in the opinions of the Quarterly Review; but our delicacy towards the dead would be excessive, if it induced us to withhold justice from the living. It is notorious that Dr. Gooch was the author of the attack upon Dr. Burrows, and it is equally well known that he was the last man who ought to have ventured to criticise either the work or the conduct of Dr. Burrows; for Dr. Gooch was neither an unprejudiced nor a disinterested judge. He was biassed against Dr. Burrows by a pique under which he had long been smarting, and he was interested in marring the professional character of Dr. Burrows, because he was anxious to obtain for *himself* a reputation in the treatment of insanity.

" Critics there are who other names deface,  
And fix their own with labour in their place."

Some apology may be found for Dr. Gooch. The vindictive attack upon Dr. Burrows and other physicians was written when the better feelings of his mind were annihilated by bodily pain and great mental irritability. For his friends no excuse can be urged: they should have suppressed the article altogether, instead of resting satisfied with depriving it of a small portion of its misplaced and uncharitable asperity. Dr. Gooch was justly respected for his talent, and it must be a source of sincere regret that he should have tarnished his fair name by this last of his literary labours. It would be unjust not to state that the very

\* April 17th.

liberal, delicate, and witty pun upon Dr. Burrows' name, did not proceed from Dr. Gooch's pen : this exquisite specimen of vulgarity was added, after the original article had been revised and shorn of some of its foul proportions, by another person who polished it for publication.

It is lamented in the *Quarterly Review*, that "such a mass of trash" (as Dr. Burrows' "Commentaries,") should be in the hands of the English student of mental diseases, and go forth to foreign nations as a specimen of what the English mind is capable of effecting on such a subject." What a very different estimate has been formed of the talent of Dr. Burrows as a writer in foreign nations, may be gathered from the fact of his "Inquiry" having been translated into French and German. Of his "Commentaries" an American writer speaks in the following eulogistic terms: "It displays considerable research, industrious observation, correct and elevated feelings, and a spirit of candour and real love of truth. The author writes like an intelligent gentleman, a good physician, and pure moralist."\* In all the English journals, Dr. Burrows' work was mentioned with the highest approbation.

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*A Practical Essay on Stricture of the Rectum: illustrated by Cases, showing the Connexion of that Disease with Prolapsus of the Rectum, Irritation of the Lungs, Affections of the Urinary Organs and of the Uterus, Fistula, &c. To which is now added, some Practical Observations on Piles, and the Hæmorrhoidal Excrescence.* By FREDERICK SALMON, Senior Surgeon to the General Dispensary, Aldersgate street. *The Third Edition, very materially enlarged.*—8vo. pp. 272. Whittaker and Co. London, 1829.

It may fairly be inferred that there must be some merit in a work which has so quickly run on to a third edition. It is now but little more than two years since Mr. SALMON first published upon the important practical subjects to which he has devoted his attention. In our *Journal* for February 1828, we gave a brief analysis of the first edition of this work, and we shall now advert to those parts of it which we did not then notice, as well as to those which have been subsequently added.

In the preface to the present edition, the author informs us that, although the period which has elapsed since the publication of the last has been exceedingly limited, it has

\* North American Med. and Surg. Journal, October 1829

nevertheless afforded him an extended opportunity of practically applying the opinions he originally offered to the profession, and of witnessing their usefulness. He believes that a careful perusal of the various additions made to the present volume, and more particularly of those cases which evince beyond a doubt the connexion of affections of the uterus and the vagina with disease in the lower bowel, cannot fail of awakening the profession to the study of a malady which has hitherto been most superficially attended to.

Mr. Salmon had purposed to illustrate the various kinds of stricture by drawings, but unfortunately he intrusted a large quantity of morbid preparations, which he had been some years in collecting, to the care of a professional gentleman of reputed character, from whose possession the most valuable of those preparations were unaccountably lost, and he is consequently deprived not only of the opportunity of fulfilling his intention, but likewise of offering to the profession, as he had promised, a series of lectures upon the various diseases of the rectum. The loss Mr. Salmon laments does, indeed, appear unaccountable, and more especially as the "most valuable of the preparations" are missing: some scientific depredator must surely have them in safe custody.

Mr. Salmon first makes a few preliminary remarks on the anatomy of the rectum, and its relative position with the viscera in the pelvis, and then proceeds to enumerate the causes and different kinds of stricture, the morbid anatomy and situation of the disease. The symptoms and treatment of stricture are next described. The fifth chapter treats of the introduction and use of the bougie, of its formation, and also of gum-elastic, metallic, and medicated bougies. In chapter vi. the usual appearances which occur during the curative process of stricture are pointed out, and the proper manner of discontinuing the bougie is stated. As we have given, in the former Number of our Journal to which we have already alluded, an abstract of Mr. Salmon's opinions upon these subjects, we pass them over at present.

Upon the subject of dividing the stricture, Mr. S. is of opinion that, taking into consideration the danger consequent upon hemorrhage, the probability of inflammation, and the distressing irritation which arises from the necessity of keeping the divided portion of the gut separated during the healing process, the division of the stricture may be always accounted a dangerous, and in many cases

an equally useless operation. There are few instances where it can be attempted with utility and safety.

"It may be performed, where the obstruction is sufficiently near to the orifice to admit of an examination of the disease being made with the finger;\* indeed, unless this can be accomplished, I should not feel justified in attempting the operation, since there is not any safe criterion whereby to judge of the extent and nature of the contraction, or any guide to prevent our injuring blood-vessels of considerable magnitude, the hemorrhage from which might, under circumstances of local irritation, prove fatal.

"Even under the most favorable progress, the patient will find a difficulty in retaining the bougie in the bowel after it has been divided, which is essential to ensure the success of the operation.

"It may be necessary, in making these observations, to draw the reader's attention to the distinction between that kind of obstruction which is produced from the formation of adventitious bands, or septa in the rectum, and stricture of the gut itself; since, as I have before mentioned, the former may be freely divided, without any apprehension of danger.

"Having resolved upon the division of the part, we proceed with the operation in the following manner: The forefinger of the left hand being introduced into the rectum, to ascertain the most prominent parts of the stricture, and that no vessels of magnitude prevent its safe division, a broad probe-pointed bistoury, its side resting upon the finger, is to be passed fairly beyond the obstruction; the edge should then be everted, and the stricture divided in one or more parts, as may be necessary.† It will generally be requisite to divide the intestine in several bearings, and we should not be satisfied till we are able to introduce a bougie of the size of number nine or ten. I think this mode of division preferable to that of one deep incision; since we cannot with safety completely separate the muscular coat of the intestine, excepting towards the sacrum; and, even in this situation, there is considerable hazard in so doing." (P. 62.)

When the hemorrhage has ceased, the rectum is to be cleansed by an enema of tepid poppy water, and a portion of bougie, well oiled and covered with lint, or a plug entirely composed of the latter material, introduced, of sufficient size to distend the bowel. It is not necessary to pass this farther than through the part which has been divided. If practicable, this should remain in the rectum twenty-four hours, by which period discharge will generally have commenced; after which we may be satisfied that no union by adhesive inflammation will take place. "It is then to be

\* "This, of course, does not apply to carcinomatous disease of the rectum."

† "Sir Astley Cooper's knife for hernia, made broader in the back than is common, is an excellent instrument to use for this purpose."

removed, and, after the bowel has been emptied by an enema, to be replaced by another plug, smeared over with simple ointment." This plan is to be adopted daily till the intestine is healed, which will be evinced by the absence of discharge upon the dressing. During the curative process, the smallest quantity of the most nutritious food is to be allowed; and after the first two days, a dose of castor oil is to be given. When the part is healed, a full-sized bougie must be introduced every third or fourth day, suffering it to remain in the bowel till the patient is desirous, from the irritation it excites, to have it removed. "If inflammation occur, or great local irritation ensue, the bougie must be immediately removed, and the necessary measures adopted, *with the utmost promptitude and decision.*" Mr. Salmon, however, is averse to this operation: he does not think it likely to be productive of that degree of success which may be considered a compensation for so hazardous and painful an expedient.

Upon the subject of carcinoma of the rectum, Mr. Salmon is very brief: he is apparently unacquainted with the operations of LISFRANC, who has removed cancerous portions of the lower part of the rectum in several instances, with success. A brief account of these cases is given in the *Journal des Progrès des Sciences Médicales*, tom. i. 1830, p. 266.

In the ninth chapter, the author offers some further remarks on various affections that may be considered as the necessary consequences, if not the immediate symptoms, of stricture of the rectum; and first of the *urinary organs*. We need only refer to the relative situation of the bladder and the rectum, to perceive how natural it is for the functions of the former to be more or less disturbed by stricture in the rectum. The constant efforts to relieve the bowels, by occasioning pressure upon the fundus of the bladder, speedily excites a corresponding irritation in this part, inducing a frequent desire to void the urine; while accumulations, collecting in the lower portion of the rectum, irritate the neck of the bladder more particularly, and promote spasmodic action to such a degree as even entirely to paralyse its functions: hence we may have either incontinence or retention of urine from the same source.

"The exciting cause remaining, nature will proceed to relieve herself by the formation of matter, either at the neck of the bladder or in the prostate gland; and, in extreme instances, disease will extend into the mucous coat of the bladder, and thence even into the kidneys themselves. A singular and interesting case of

the two latter affections combined, the result of mechanical pressure, from a large tumor on the pelvis filled with hydatids, will be found in the sequel. In this instance it was somewhat remarkable that, although the urinary organs were considerably disturbed, and the patient died from matter forming in both the kidneys, the symptoms of obstruction in the rectum were not of sufficient importance to lead to any examination of the part. Though the passage through the bowel must have been greatly obstructed by the pressure of the tumor, there was not any difficulty of passing relief from the bowels: there was, however, a frequent desire so to do, and the stools were of small size, but in other respects they were healthy; yet the irritability of the urinary organs was so great that the patient was obliged to pass his water every two or three hours, in doing which he experienced much difficulty and pain. I here suspected obstruction in the urethra, and in consequence introduced a bougie into that canal, which only aggravated his sufferings; yet I encountered no symptom of disease, save extreme tenderness at the prostatic part of the canal.

"The collection in the rectum before alluded to, aggravated by an enlarged and distended state of the colon, pressing upon the kidneys, deranges their function, giving rise to unhealthy secretion, whence may originate the formation of calculi; so, likewise, the irritation propagated to the canal of the urethra may promote either morbid discharges or the momentous malady of stricture." (P. 72.)

That these various effects may result from the same cause, is illustrated by several cases.

Chapter x. "Of affections of the Uterus and Vagina." Mr. Salmon has no doubt of the intimate connexion of many affections to which the uterus is liable, with irritation or obstruction in the rectum. For some years he has acted upon this principle in practice with the happiest results.

"One of the most frequent and distressing effects of stricture, is an enlarged or tender condition of the uterus. These are most afflicting cases, since we are not able to introduce instruments of any size, the enlargement of the uterus creating a partial obliteration of the cavity of the intestine: hence the bowels are never regular, and the voiding of any relief from them is always attended with more or less difficulty and pain.

"As the contraction in the rectum increases, the symptoms of the case become more and more urgent, till at last, in extreme instances, ulceration takes place, and fistulous communications are formed between the vagina and the rectum. These generally happen at the situation of the recto-vaginal septum, where the parts are very thinly separated by intervening cellular tissue. A more lamentable affection than this cannot easily be imagined: happily, however, it is proportionably rare; for, though we cannot do much towards the removal of the stricture, by strict attention to

the constitutional and local treatment, we are generally enabled to keep it stationary. These fistulæ, however, sometimes occur, where the stricture itself, from which they result, has been overlooked either altogether, or till it has reached a very serious extent. The best surgery is in these cases productive of little or no benefit.

" Even in the early stages of stricture, we generally find the uterus sympathise with the rectum, and indistinct appearances arise, leading us to suspect incipient disease in the former organ, which disease will disappear upon the removal of stricture in the rectum. Not unfrequently, however, is the treatment directed to the uterus, considering it as the primary affected part.

" I have had many cases illustrative of this fact: I remember one in particular, the subject of which had for some months been under the care of several experienced practitioners for what was considered to be 'an enlarged and tender state of the cervix uteri.' The indications of disease in this part altogether disappeared, on the removal of a simple spasmodic stricture in the rectum. Here the effect of enemas was truly surprising: in the course of a fortnight the irritability of the bladder, which was considerable, and the frequent inclination to relieve the bowels, subsided. The patient had still, however, a degree of difficulty in accomplishing the latter, resulting from the enlargement of the uterus.

" I have known discharges from the vagina to subside upon the relief of stricture of the rectum; and I believe that many cases of irregularity in the menstrual discharges originate in an irritable or contracted state of the lower bowel. This position is extremely probable, when we reflect upon the contiguity of the parts; for, from any accumulation in the rectum, pressure is made upon the uterus, which is increased at every attempt to relieve the bowels, irritating the former organ and disturbing its functions. Furthermore, in those instances in which stricture has existed in the lower bowel for a protracted period, adhesions form between the posterior surface of the uterus and the rectum; which adhesions not only displace the womb, but, by preventing its natural ascent out of the pelvis during the period of pregnancy, may give rise to the more formidable evil of miscarriage. (P. 121.)

In proof of the practical application of these observations, some interesting cases are related. We give the following as a specimen of affection of the uterus connected with stricture of the intestine.

" Mrs. —, age thirty-five. October 1824. Complained of violent bearing-down pains, and of pains in the groins, extending into the region of the bladder, the lower part of the back, and down the thighs. For many years past she had suffered from dysmenorrhœa; occasionally voiding, during the period of the menses, a solid fibrous-like substance, which was followed by an



offensive discharge from the vagina, which lasted for several days; the latter symptom she commonly experienced to some trifling extent; she also at times had great difficulty in making water. Upon inquiring into the state of her bowels, I found they were irregular, being scantily relieved at intervals of several days apart, with difficulty and pain; latterly she had been annoyed by itching and heat around the orifice of the rectum. Her general health was disordered; she suffered from flatulence, a sense of distention, and pain in the stomach after eating; also from pain in the head, especially at the back part. I recommended the immediate examination of the rectum, to which my patient readily assented. Having followed my usual plans for one week, on the 23d of October I examined the bowel.

"Upon attempting to introduce my finger, I encountered a solid obstruction, which I cannot better describe than as a ridge extended across the orifice at its upper and inner portion: this not only prevented the natural dilatation of the part, but formed a permanent obstacle to the passing of the contents of the bowel. The part was exceedingly irritable, and the introduction even of my finger produced considerable uneasiness. The sphincter was remarkably broad, and extended to the depth of a full inch. By examining per vaginam, I ascertained that the uterus was enlarged, and tender to the touch; it also appeared lower in the vagina than is common. Judging from the symptoms of the case, the protracted period of my patient's annoyances, and the examination, I was apprehensive of incipient disease in the uterus; being, however, certain that, while the orifice of the rectum was in its present state, no permanent improvement could take place, and having, by the introduction of a small-sized rectum bougie, ascertained the existence of stricture at the sigmoid flexure of the colon, I recommended the division of the sphincter, so as to allow of the introduction of instruments of sufficient size to remove the contraction above; giving it as my opinion, that the irritability of the urinary organs, the discharge per vaginam, and the condition of the general health, were the result of the obstruction in the rectum. She unhesitatingly consented to follow any treatment considered advisable.

"Having adopted my usual plans for ten days or a fortnight, introducing the same bougie every third or fourth day, I removed a triangular portion of the sphincter, and inserted a plug of sufficient size to distend the part, and thus to prevent its reuniting by adhesive inflammation. The plug was removed twice every day, and the bowel kept free from collections by the use of an enema, till the wound was healed, which it was in the space of three weeks, when I began the introduction of Mr. White's bougies.

It is somewhat singular that, a day or two after the performance of the operation, all discharge ceased, and the bowels were daily relieved without medicine. In the course of three weeks, however, the discharge returned in an increased quantity; she likewise

experienced some difficulty in making water. I persisted in my usual plans, introducing the bougie every fourth or fifth day for two months. The use of the instrument gave her no kind of uneasiness, excepting at the very summit of the gut. Her health improved, nor did she suffer so much either from the discharge or from pain during the period of the menses. By slow degrees I increased the size of the bougie, till I was able to pass the but five, when the discharge had ceased; her bowels also acted more regularly, and her general health was proportionably improved. I saw this patient every now and then during the following eight months, and introduced the same sized bougie; beyond which I could not advance, on account of the enlargement and displacement of the uterus.

"July 1829.—I have frequently seen this lady. Her general health is far better than it was prior to my attendance; she never has any discharge from the vagina, nor has she experienced the singular appearance during the period of menses more than half a dozen times. Her bowels, however, continue troublesome; she persists in the use of the enema, but has never attempted to pass the instrument." (P. 126.)

In the next chapter, the author treats of Distention and permanent Enlargement of the Colon. The surprising degree in which nature accommodates herself to diseased action, cannot be better exemplified than in the extensive enlargement which sometimes takes place in the colon, as a consequence of stricture either in the sigmoid flexure or in the rectum. Collections will from time to time take place, distending the bowel to an enormous size; which collections remaining for some time, impair the contractile power of the intestine, and thus create a permanent irregularity and a difficulty of voiding the contents of the bowel. In these instances, Mr. S. observes that it is often beneficial to wear a broad elastic belt round the body, applied sufficiently tight to afford support, but not to create unpleasant pressure.

"But distention of the colon is apt not only to derange the functions of other parts, but to cause appearances which, even under the closest examination, may be mistaken for a diseased condition of the structure of those parts. Any accumulation of food in the stomach, creating, from pressure, uneasiness and pain in the transverse arch of the colon, may be, and as I believe is, commonly treated as indigestion, or some derangement of the stomach. So, also, any material collection of feces in the upper parts of the ascending and descending portions of the bowel, is likely to be mistaken for an enlarged and diseased condition of the liver; while the continued pressure upon the diaphragm, causing more or less difficulty in respiration, may lead us to apprehend incipient affection of the lungs. Thus, in process of time, causes

and effects become so intimately blended, that the most accurate examination is insufficient to discover the primarily affected part." (P. 165.)

In confirmation of these remarks, three interesting cases are related; but we must refer to the work itself for the details of them, as they are given at considerable length.

Chapter xii. "On Piles." This distressing disease may arise from various causes, but, according to Mr. Salmon, they all tend towards the same results, viz. distention of the minute vessels of the mucous coat of the rectum, and enlargement of the hemorrhoidal veins. Piles may therefore be produced by any circumstance, constitutional or mechanical, preternaturally exciting, or mechanically obstructing, the circulation in these particular parts.

"But another and extremely prevalent cause of the disease will be found in a contracted condition of some part of the rectum, which causes an accumulation of feculent matter in the bowel: this necessarily irritates it, and its mucous surface more especially; while the perpetual straining which accompanies the desire to relieve the bowels, (the result of the accumulation,) injects the minute vessels of the part, distends, and finally causes them to rupture; hence arises the hemorrhage generally experienced, more or less, by those who are subject to piles. Now, it is not always judicious suddenly to correct this effect; for, although it is a diseased action, it not unfrequently is the mode by which nature relieves herself, and it thus, perhaps, prevents the formation of a more serious disease. Through the same reason the hemorrhoidal veins may become distended, which seldom burst, but, enlarging, form permanent tumors in the rectum. This enlargement will continue to increase, provided the cause of the distention remains uncorrected, till, in extreme cases, the entire cavity of the intestine at its lower part will be nearly obliterated. I recollect an instance of this kind, in which, from the distention of the hemorrhoidal veins, the finger could not be introduced beyond the first joint; the patient was likewise the subject of fistula in ano.

"Another effect of irritation in the rectum is the coagulable lymph, which, from time to time, is thrown out upon the inner coat of the intestine, and between its muscular and mucous coats; which lymph, becoming organized, at last creates a mass of diseased superstructure, productive of intolerable pain." (P. 203.)

The brief comments Mr. Salmon offers on the medical treatment of piles, do not particularly claim our attention. With respect to the surgical removal of the hemorrhoidal excrescence, upon which much difference of opinion still exists, he is of opinion that, if the subject be dispassionately considered in all its bearings, the weight of evidence will greatly preponderate in favor of excision, in preference to the application of the ligature.

"To substantiate this position, let us suppose the instance of a surgeon being consulted by a patient suffering from an extreme case of the hemorrhoidal excrescence. He inquires into the state of the patient's general health, and ascertains that he has not any enlarged or otherwise diseased condition of the liver; no stricture in the rectum, nor any organic affection to which the formation of the excrescences may be reasonably attributed. He examines the part, and discovers one or more tumors originating in the rectum, and either protruding externally or being within the sphincter. On what is he to found his judgment as to the removal of the diseased parts, by excision or by ligature? I should say not so much upon the size of the tumors, and their extent of attachment to the rectum, as upon the condition of the hemorrhoidal veins. When the tumors are external to the orifice of the bowel, there cannot, I think, be a question as to the manner in which we ought to proceed; since, as we are able to quell any hemorrhage which may ensue, we have a perfect control over the only circumstance which (in this instance) militates against the operation by excision.

"In the removal by ligature, we shall have to encounter much local irritation, and not unfrequently severe constitutional disturbance, over which, when it is once excited, we have a very limited control. Provided there are several tumors (a common occurrence) we shall be necessitated to perform several operations. The application of the ligature is usually extremely painful, its operation tedious, and not unfrequently incomplete, either from the ligature getting loose, or by reason of the base of the tumor being left, which forms a nidus for the return of the disease. The treatment after the removal of the tumors is likewise protracted; and lastly, it is, I think, inapplicable where there is any material distention of the hemorrhoidal veins.

"Now, the removal of the excrescence by excision is more expeditious, it is more complete, the pain is less, as is the danger either of local inflammation or of constitutional disturbance; the parts heal more kindly; and, finally, when we are compelled to divide the enlarged hemorrhoidal veins, the probable danger from hemorrhage is not by any means so great as that which is to be apprehended from the constitutional and local disturbance which almost invariably follows the including of them in a ligature.

"The application of ligatures to veins is, I think, one of the most uncertain operations in surgery. I have so often seen fatal results follow their use, that I confess I am not a little prejudiced against the operation; and I believe that the failure of the removal of the hemorrhoidal excrescence by the ligature is often referrible to the injudicious manner in which the ligature is placed upon the enlarged hemorrhoidal veins.

"A reasonable objection may be advanced against the operation by excision, in the division of the mucous membrane of the part; but I would fearlessly ask, is the danger of inflammation from this

cause greater than that which is likely to ensue from the application of a ligature to the same part? I should think not.

"So far as my experience has gone, I can only say that I have repeatedly performed the operation by excision with perfect success: occasionally I have had to encounter hemorrhage, but never to such an extent as to endanger the life of the patient, or, indeed, even to be a source of serious apprehension. I am inclined, therefore, to believe that, when bleeding ensues to any material extent, it is in those cases where the tumors are accompanied with an enlarged or otherwise diseased condition of the liver, with stricture of the bowel, or such an unhealthy condition of the constitution as may give rise to an hemorrhagic disposition in the vessels at the lower part of the alimentary canal; and, in the neglect of the due observance of any of which circumstances, not only the danger, but the unsuccessful issue, of *either* description of operation is very likely to originate.

"Prior to the removal of the hemorrhoidal excrescence by any kind of operation, we ought carefully to survey the various points to which I have alluded; and, above all, we ought to examine into the condition of the rectum; for, in the early stages of piles, where the disease is accompanied with any contraction of the bowel, we shall often be able to mitigate the former by the removal of the latter." (P. 209.)

Mr. Salmon has seen many instances which confirm this observation, and a few of them are detailed.

In the last chapter, a few remarks are made, and cases in point are related, of determination of blood to the head, occurring as a consequence of stricture of the rectum.

The practical opinions advocated by Mr. Salmon have evidently been formed from his personal observation, and as the subjects upon which he treats have received less consideration than many others of minor importance, his work must be considered an acceptable addition to the library of the surgical student.

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*Observations on the Functional Disorders of the Kidneys, which give rise to the Formation of Urinary Calculi: with Remarks on their frequency in the County of Norfolk.*

By WM. ENGLAND, M.D., Extraordinary Member of the Royal Medical and Royal Physical Societies of Edinburgh, and Member of the Physical Society of Guy's Hospital.—8vo. pp. 108. Underwood, London.

WE were induced to hope, from the preface to these observations, that Dr. ENGLAND had some new facts, or at least some very substantial theory, to offer, which would tend to explain the origin of calculous diseases in a more satisfac-

tory manner than had hitherto been done. But we have been disappointed; for the greater part of the work is occupied by the repetition of opinions which have frequently been stated. We would not, however, refuse to Dr. England all claim to originality: he throws out a few new suggestions, but they are mostly crude and unsupported.

A brief sketch is first given of the different opinions that have been entertained respecting the origin of urinary calculi. The author contends that the attempt to explain their origin upon chemical reasoning, must be always attended with a complete failure:

"For, notwithstanding the rapid advances towards perfection which have distinguished that science during the last fifty years, it must be very obvious that the operations of chemical affinity must become altogether ineffective when we wish to make it exert any influence over vital laws: in fact, chemical agents, when they operate upon the animal economy, are altogether modified in their action by the laws of life.

"The application of chemical reasoning to pathology is in no case so erroneous as when an endeavour is made to account for the origin of calculous diseases upon chemical principles: the necessary consequence of directing our investigation in such a path, is that we are apt to overlook altogether the susceptibility which the kidney, as well as any other secreting gland, has of taking on certain morbid actions. As a proof of the tendency which an exclusive direction of our views to the play of chemical affinities has to render us blind to the consideration of the vital powers of a gland, that excellent practical chemist, Dr. Marcet, attributed the formation of urinary concretions to a separation and consolidation of certain ingredients contained in the urine; for he says that, 'independent of any specific agency of the urinary organs themselves, calculi are liable to form in any of the cavities to which the urine has access.'" (P. 11.)

We pass over many of the succeeding pages, not because we doubt the validity of the arguments contained in them, but because they are destitute of novelty. It is now universally admitted that, when the functions of the skin are deranged, and the digestive powers impaired, the quality of the urine is altered, and a tendency established to the production of calculous diseases.

Some interesting remarks are made on diet and habits of life, as exciting causes of renal disease. The frequency of calculous diseases in the county of Norfolk, in which the author resides, is attributed by him to a combination of causes; as the indigestible nature of the food of the working classes.

"No alimentary preparation is less capable of digestion than the

Norfolk dumpling, when eaten in the quantity in which it is consumed by the hard-working peasant: it gives great distention to the stomach, and being made of flour deprived of the bran, or cortical envelope of the grain, it has a natural tendency to induce constipation, when not combined with laxative adjuncts: it is, therefore, in this respect extremely inferior to oatmeal cakes, which have the property of inducing continually a regular action of the bowels by the mechanical stimulus of the particles of bran upon the nerves of the intestinal mucous membrane." (P. 70.)

The severe muscular exertion required in the use of the short-handled spade, which is generally employed by the Norfolk labourers, it is also supposed, may affect the functions of the kidneys.

"The relative situation of the kidneys with respect to the *psoæ* and *quadrati lumborum* muscles, and also their attachment to those muscles through the medium of adipose membrane and small blood-vessels, ought to be reflected upon when we investigate the obscure pathology of these organs. I am convinced that the great liability of the kidneys to be functionally disordered in consequence of over-exertion of the lumbar muscles, has been much overlooked.

"The important influence exerted upon the kidneys during the action of those muscles, is very evident: that very superior anatomist, the late Mr. Wilson, says, that 'branches from the lumbar arteries are sometimes found to enter the kidneys from behind; and I have also found branches from the renal arteries passing out from the substance of the kidneys, and forming communications with the vessels of the neighbouring parts.'" (P. 74.)

And, lastly, the geographical situation of the county of Norfolk is considered by Dr. England to be favorable to the production of calculous diseases.

"The geographical situation of the county of Norfolk renders its inhabitants more exposed to the impression of cold chilling winds than any other county of England; the whole of its north and east sides are directly acted upon by winds from those quarters; the former of which meets with no interruption to its progress from the icy deserts of Spitzbergen, and the latter passes over the flat districts of Holland and the north of Germany, to pour its unbroken and malignant force upon the exposed shore of this eastern county. From its peculiar position, and the absence of hills of sufficient elevation parallel with the shore, the air of this county is extremely cold in winter, and, during the early parts of the spring, vegetation is generally kept back by sharp easterly winds and a vast quantity of sleet." (P. 90.)

The frequency of urinary calculi in the county of Norfolk has been long known; but why such diseases should be more prevalent in this district than in many other parts of

the country, is yet to be explained. 'The Norfolk dumpling may be very indigestible, the short spade a tool which requires great labour, and the inhabitants may be much exposed to cold and chilling winds; but in various other parts, where calculous diseases are comparatively rare, the labouring classes live upon equally indigestible food, work as hard, and are as much exposed to an ungenial climate. In our opinion, then, Dr. England has not satisfactorily shown why calculous diseases are so much more common in Norfolk than in many other districts.

The treatment of calculous diseases which Dr. England recommends differs but little from that of MASON GOOD, and many other practical writers upon the subject, whose works are well known.

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*A Popular Summary of Vaccination, with Reference to its Efficacy, and probable Causes of Failure; as suggested by extensive Practical Experience.* By J. MARSHALL, Esq., Member of the Royal College of Surgeons in London, and District Vaccinator to the National Vaccine Establishment.—8vo. pp. 95. T. and G. Underwood, London, 1830.

THE object of this treatise is to bring into a narrow compass the principal causes of vaccine failure, in the hope of removing those doubts which have been too frequently thrown upon the practice of vaccination. The facts are supported by observation made during an extensive practice, under the direction and patronage of the National Vaccine Board. An arrangement has been adopted by Mr. MARSHALL, of classing the more prominent objects of interest under distinct heads, so that, by reference to the table of contents, the reader may at once become acquainted with all that is said upon any one point in the inquiry.

The subject of vaccination has been so frequently discussed in all its bearings, that we shall not enter into a regular analysis of each section of Mr. Marshall's summary. It may be sufficient to observe, that the points to which he has directed his attention are briefly yet satisfactorily treated. Judging from our own observation, we are inclined to believe that the confidence of the public in the protective power of vaccination is as great at the present moment as it has ever been. We very rarely hear any wish expressed for the inoculation of smallpox. That modified smallpox does occasionally occur after vaccination, is notorious; but this fact has ceased to cause the apprehensions it originally produced. With very rare ex-



ceptions, the modified variola is now known to be a mild and harmless disease, neither endangering the life nor personal appearance of the patient. There are some questions, however, in reference to vaccination, which are yet unsettled in the public mind, and which are perhaps not entirely set at rest amongst some of the members of the profession. To these we shall more especially refer.

That the vaccine lymph is not deteriorated by numerous transmissions through the human constitution, is still doubted by a few. Mr. Marshall says, that

"This fact is at once proved by the character of the vesicle being in every respect the same, after the lapse of thirty years, as that presented in the first instance, when immediately produced from the cow. Having been, from the year 1800, a governor of the original Vaccine Institution, and joint treasurer for some years, it has enabled me to add my testimony to the truth of this curious fact, and which is exemplified by the coloured engraving prefixed to the First Report of the Vaccine Institution, published in the year 1803, exhibiting progressive specimens of the vesicle in all its important stages, and which exactly accords with the graphical representations of Dr. Jenner. My appointment of district vaccinator to the National Vaccine Establishment has afforded the additional opportunity of minutely observing the repetition, in every essential point, in nearly three thousand cases. In the last Annual Report, dated March 2d, 1829, these remarks are most satisfactorily confirmed; 'for it does not appear to us to be weakened or deteriorated by transmission through any number of subjects in the course of any number of years.' Hence the virus of the vaccine vesicle has the same properties, as appears from the effects on the human constitution, whether it be generated by the cow or by man; and these properties are the same, however remote from the origin of the poison in the cow; and it may be continued, *ad infinitum*, from one person to another, without any necessity of recurring to the original matter of the cow." (P. 18.)

The period of taking the lymph for the purpose of vaccination, is a subject of infinite importance, and the regulations regarding it cannot be too deeply impressed on the attention of practitioners. We were once absolutely astounded at being very gravely informed by a practitioner of thirty years' standing, that *he* believed, and that he always had and always would act upon his opinion, that it signified nothing at what period "matter" was taken, whether at the fourth or fourteenth day of the vesicle, provided it could be obtained. Need we say that this gentleman had little or no confidence in the protective power of vaccination, or that his patients very frequently suffered from his obstinacy and ignorance. Mr. Marshall states

that the lymph "cannot be used too early: as soon as the vesicle, even as early as on the fourth or fifth day, yields sufficient lymph to arm the lancet, it may be done with the surest effect; the usual time, and the latest recommended, is on the eighth day, prior to the full developement of the areola." We would rather take the lymph at the eighth day, in preference to an earlier period; not because we believe that the vesicle produced from vaccination at that period will be more perfect than if the lymph were taken before, but the public are so fully acquainted with the appearance of an eighth-day vesicle, from which lymph is usually taken, that they are dissatisfied, and remain apprehensive in future, if their children are vaccinated from an earlier vesicle, which to them appears imperfect. Upon a subject in which the feelings and anxieties of mothers are so deeply implicated, we may fairly yield a little even to their caprices, when the efficacy of our practice is not endangered. It must be remembered that, although Jenner recommends the ninth day, yet his practice was evidently guided by the state of the areola; for he interdicts "the use of the virus after the formation of the efflorescence around the pustule." The following remark from Mr. Marshall is worthy the attention of the practitioner.

"It seems however, that there is no general rule, either in grammar or life, without an exception; for, even on the eighth day, cases do now and then occur from some constitutional cause, where the vesicle is perfectly correct in all its phenomena, but with the surrounding inflammation at its full height, and even past, as displayed by the concentric circles. For the purpose of propagating vaccination, however, such cases ought invariably to be rejected." (P. 33.)

Some difference of opinion still exists as to the number of punctures that are necessary in the performance of the operation. Protection from the smallpox can be the only object, and we are not aware that any facts have arisen to show that this disease has occurred more frequently after vaccination where one puncture was made, than where there were several. The practice of depending upon one puncture, however, is deprecated by Mr. Marshall; and it is to be observed, that the Board of the National Vaccine Establishment have uniformly enforced the practice of making treble punctures in each arm, and they have also inculcated the absolute necessity of leaving one or two vesicles at least entire. We have heard several surgeons express their fears of violent inflammation, if several punctures were made. Such apprehensions our own observation

taught us were groundless, and we find Mr. Marshall does not participate in them.

"It affords a gratifying consolation to be able to remark, notwithstanding the free manner of operating generally adopted, that only a single case has occurred of erysipelatous inflammation, extending from the shoulder to the elbow, after the twelfth day which readily yield to a saturnine lotion. The arm thus affected had four vesicles, the other three, with the areola of the usual character and dimensions, marked by the concentric circles; whence an inference was drawn, that the inflammation had been effected either by accidental pressure or external injury. If it had arisen from a constitutional cause, both arms must have been equally affected, therefore it did not constitute a case of erysipelas, but mere local inflammation. Dr. Jenner mentions three instances of erysipelatous inflammation appearing on the vaccinated arm, which, by the application of mercurial ointment, subsided without giving much trouble." (P. 45.)

They who still require information upon the subject of vaccination, will do well to consult the brief volume we have just noticed. From being the district vaccinator to the National Vaccine Establishment, Mr. Marshall has extensive experience of his subject, which is the best claim to the attention of the profession.

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*A Vade-Mecum of Morbid Anatomy, Medical and Chirurgical; with Pathological Observations and Symptoms. Illustrated by upwards of 250 Drawings.*—Burgess and Hill, London, 1850.

WITH whatever zeal practitioners in general may be inclined to prosecute every useful branch of professional information, it can fall to the lot of but few to command either the requisite time or opportunities for acquiring a competent knowledge of morbid anatomy. It is not the inspection of a few insulated cases that can impart this knowledge; months, and even years, of laborious investigation must be expended before we can obtain the tact of distinguishing with certainty even the appearances presented on dissection, after diseases of the most ordinary kind; while those alterations of structure which are produced by maladies of more rare occurrence, can in general be known only to those who enjoy unusual opportunities, and who possess unwearied diligence. Such a work as the present must therefore be a valuable acquisition to the majority of medical practitioners; for, although it is very true that neither graphic illustrations nor verbal descriptions can convey a perfect knowledge either of natural or

morbid anatomy, they will certainly assist the memory in retaining what has once been practically learnt, and, if attentively studied, will impart a very useful degree of preparatory information of those appearances which have not yet been presented to the observation.

The objects which the author of this *Vade-mecum* has most zealously endeavoured to achieve, are to furnish a concise and faithful transcript of the labours of all the eminent morbid anatomical writers, and to illustrate the productions of his more elaborate predecessors. He has not, however, confined his task merely to transcribing and illustrating what others have seen and written; but he has blended in the work some account of what he has himself observed, during many years of close application to the subject. The work contains observations on, with illustrations of, the changes of structure found in the brain, thoracic, abdominal, and pelvic viscera, and of the organs of generation in both sexes. It likewise gives a brief sketch of the pathological symptoms by which we judge of disease during life, and a true description of the morbid changes that are exhibited after death. The sketches have been taken either from diseased parts in the author's museum or from recent dissection.

It forms no part of the plan of the work to give cases, or to introduce all the strange appearances that are occasionally found after death. A brief statement of symptoms and morbid phenomena in diseases the most likely to fall under the daily notice of the practitioner, has been wisely preferred to hypothesis, and to rare or doubtful subjects.

A regular analysis of a work, of which each page is occupied by a different subject, would be impossible; but we give the following extract as a specimen of the manner in which the whole is executed.

“ Plate xiv. This plate represents acute and chronic inflammation of the œsophagus, and its effects. Fig. 1. Acute inflammation of the mucous tissue of the œsophagus. 2. Fibrine deposited in the œsophagus: it was moulded to the caliber of the tube, and slightly adhered to its mucous tissue. 3. An enlarged state of the mucous glands situated in the œsophagus. 4. Extensive ulceration of the mucous follicles of the œsophagus. *SYMP.* *Inflammation of the Œsophagus.* Burning sensation on taking food; pain in the neck, particularly in the side, which is increased on pressure; dryness of the fauces; regurgitation of the food through the nostrils. *Ulceration.* An uneasy sensation in some part of the œsophagus, which is aggravated after eating, or after drinking ardent spirits; a lancinating or burning sensation in one

or more parts of the tube; slight cough, cardialgia, repeated efforts to clear the throat of a tough dirty-coloured matter."

The morbid anatomy of all the organs of the body is thus illustrated. The symptomatology of the various diseases, of course, forms but a secondary object of the work; but the author has not failed to render his concise account of the leading symptoms very useful for the student.

We recommend this *Vade-mecum of Morbid Anatomy* to the attention of the profession; it will be valuable both to the junior and senior members, either for deliberate study or occasional reference. Although a considerable expense must have been incurred in getting it up, the price is extremely moderate. The publisher has doubtless calculated upon an extensive sale, and we believe he will not be disappointed.

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## COLLECTANEA.

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*Floriferis ut apes in saltibus omnia libant,  
Omnia nos, itidem, depascimur aurea dicta.*

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### PHYSIOLOGY.

*Communication between the Uterine and Placental Vessels.* DR. BIANCINI published last year, in the *Antologia Giorn. di So. &c.*, some experiments which he had made to prove that there exists a direct and immediate circulation between the mother and fœtus. He injected the vascular system of a woman who died in childbed, from inertia of the uterus, the placenta being still attached to the uterus: he found the injection in the vessels of the chorion and of the amnios, and, on examining the tortuous arteries of the uterus, he observed that they penetrated the tissue of the placenta, that they spread themselves over these vessels, and that they had deposited the injection in the cells described by HUNTER and MECKEL. In a young woman who died eight days after delivery, and in whom a small portion of the placenta still adhered to the uterus, the injection introduced into the uterine arteries not only passed from the uterus into the adherent portion of the placenta, but also spread itself into the cavities of the uterus and vagina, through the lacerated extremities of the vessels which Dr. B. names utero-placental arteries. On dissection, the vessels of the uterus and placenta were found filled with the injection. In a woman who died in childbed from metrorrhagia, the injection introduced by the aorta exhibited the tortuous arteries continuous with those of the uterus, and which, by their free and open extremities, had permitted the injection to transude on the internal surface of the uterus. It was, Dr. B. thinks, by these utero-placental vessels that the fluid in the first experiments passed from the uterus into the placenta. These vessels (according to Dr. B.) M. LAUTH, jun. has improperly named lymphatics.

These experiments have given rise to much controversy in Italy. Among others, Dr. RIGALLI has opposed to them some anatomico-physiological observations, founded upon a great number of experiments made by him in 1819

and subsequently upon a woman, and the females of different species of animals. In the greater number of cases, the injection of the vessels of the uterus did not pass into those of the placenta: if, in some cases, the injection did pass into the placental vessels, the experimenter is convinced that this happened either from the rupture of the vessels, or by absorption, which function it is known goes on some time after death. In fact, if the passage into the placenta of fluids injected by the uterus occurs when the experiment is made immediately, or very shortly, after death, it never takes place when the experiment is tried a sufficient time after death for all vitality to be extinct, and absorption to have ceased. Dr. Rigalli is, therefore, convinced that the apparent results obtained by Dr. Biancini were the effects either of absorption, a pathological condition, or rupture of the vessels; and denies that they at all prove the connexion between the uterine and placental vessels, or the direct communication between the mother and fœtus.

On the other side, M. DALISO CASABIANCA has sent to the Medico-Physical Society of Florence a memoir on this subject, in which he says that, assisted by M. VINCIGUERRA, and in presence of the most celebrated professors of anatomy and physiology of the university of Pisa, he has made eleven experiments upon animals, in which mercury injected by the arteries of the mother passed into the veins of the fœtus, and *vice versa*, without its being possible, in this double passage, to discover any extravasation of the injection in the intermediate tissue. He concludes, 1st, that the fluids injected by the arteries of the mother passed into the umbilical vein of the fœtus; 2d, that the same fluids introduced by the uterine veins flowed into the umbilical arteries; 3d, that these fluids have a free circulation from the mother to the fœtus, and from the fœtus to the mother, by two series of vessels, described by M. Biancini under the name of utero-placental arteries and placento-uterine veins.—*Journal des Progrès.*

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*Case of Twins united by the Umbilicus.* By JOSHUA MARTIN, M.D. of Xenia, Ohio. (*West Med. and Phys Journal*, from *Far. Rec. and Xenia Gaz.*)

The wife of a gentleman of this vicinity was delivered on Saturday, the 29th of August, at the close of the eighth month of utero-gestation, of two living children, of ordinary size, who were attached together by a round substance of about three inches diameter, commencing at the ensiform cartilage, or lower end of the breast bone, and extending down the abdomen.

The superior part of the attachment was hard and cartilaginous, formed by the ensiform cartilage of the one extending across, and uniting with that of the other; below it was soft, and gave the sensation to the touch of a membranous sac, containing part of the abdominal viscera.

At the inferior part of the connecting medium, the skin was wanting; and at that point arose one umbilical cord, which served both children.

Anastomosis, or union of the superficial veins of the two children, could be distinctly perceived. They were both females, and in every respect natural, except that one had two thumbs on the left hand. I saw them about forty-eight hours after their birth; one of them had then been dead twelve hours, and the other died in a few hours afterwards.

The conformation of these children appears to have been precisely similar to that of the Siamese boys.

## PATHOLOGY.

*On various Appearances of the Tongue, considered in relation to Diagnosis.* By Dr. PIORRY. (*Journ. Hebdom. de Med.* No. 60.)

When the pulse is strong, frequent, full, and firm, and the conjunctivæ, the cheeks, lips and pharynx, and gums, are red, the tongue presents the same colour in a less intense degree: the difference of tint being easily explained by its peculiar structure. After profuse evacuations of blood, and chronic diseases, all the tissues and the tongue become paler than natural. In many patients affected with clearly-marked acute gastritis, enteritis, or dysentery, with but little febrile reaction, the tongue is more or less pale. In traumatic fevers, acute pneumonia, without gastric symptoms, the tongue has sometimes a vermilion hue, at others it is of a deep red. After bleeding, it becomes pale, although the stomach and liver are consecutively affected. This colour of the tongue frequently exists only at its edges, the middle being covered with a mucous secretion of variable appearance; but, if this mucous covering is removed, the tongue will be found of a uniform colour. The point of the tongue frequently becomes red by the effort which the patient makes to thrust it from the mouth. When the muscles of the organ are relaxed, the redness disappears. Dryness of the lingual surface appears to arise from evaporation of the moisture which ought to lubricate it, and which is probably always secreted in sufficient quantity for that purpose. Every cause which obliges a patient to respire by the mouth tends therefore to render the tongue dry, and every thing which increases the current of air within the cavity of the cheeks produces the same effect. Accelerated respiration frequently gives rise to this phenomenon. The tongue is usually very dry in acute pneumonia, particularly when coryza accompanies the disease. Such is also the case in pleurisy. Fever, attended by rapid contractions of the heart, and consequently quickened breathing; affections of the liver, stomach, and peritoneum, obstructing the descent of the diaphragm, and accelerating respiration, must have the same effect.

Repeated experiments and observations of the saliva and mucus under the influence of heat, have convinced M. Piorry that the principal cause of the formation of the various secretions with which the tongue and teeth are covered, arises merely from the desiccation at different degrees of heat of the fluids which ought to moisten the tongue. To this cause, he adds, as contributing to the different colours of these secretions, the nature of the saliva and mucus of the mouth, which corresponds with the nature of the blood, and which contains some of the elements that are found in it. Thus, in diseases of the liver, all the solid tissues are tinged with yellow; some of the fluids, as the urine and perspiration, have the same appearance. It is probable, therefore, that the saliva and mucus contain a small proportion of the colouring matter, which gives to the tongue the tint it presents in such cases. Lastly, abstinence will produce, in a very short time, the formation of the different coverings of the tongue referred to; and, upon taking food, they will disappear still more rapidly.

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*Local Effect of Poisons.* Of nervous impressions, without any visible organic change, few well-authenticated and unequivocal instances are known. Mr. BRODIE mentions a good example in the effects of monkshood on the lips

when chewed :\* it causes a sense of numbness and tingling in the lips, lasting for some hours, and quite unconnected with any affection of the general nervous system. Another instance, which was mentioned to me by M. ROBIGNET, of Paris, occurs in the effects of the strong hydrocyanic acid : when its vapour was confined for some time in a glass tube, with a finger on each open end, M. Robiquet remarked that the point of each finger became benumbed, and remained so longer than a day. These are unequivocal instances of a purely nervous and local impression on the external surface of the body. The most unequivocal instance I know of a similar impression on internal parts, is a fact related by Dr. W. PHILIP with regard to opium.† When this poison was applied to the inner coat of the intestines of a rabbit during life, the muscular contractions of the gut were immediately paralysed, without the general system being for some time affected. The same effect has been observed by Messrs. MORGAN and ADDISON to follow the application of ticunas to the intestine;‡ an instant and complete suspension of the peristaltic movement took place whenever it touched the gut. A parallel fact has also been described by Dr. MONRO, secundus;§ when an infusion of opium was injected between the skin and muscles of the leg of a frog, that leg soon became palsied, while the animal was able to leap briskly on the other three. Analogous results have further been obtained with the prussic acid by M. COULLON.|| He remarked, that when one hind leg of a frog was plunged in the acid, it became palsied in thirty-five minutes, while the other hind leg continued perfectly sensible and irritable. Sugar of lead probably possesses the same property.

These facts are important, because some physiologists have doubted whether there really exist any local impressions of a purely nervous nature, unconnected with organic change, and arising from the action of poisons. Yet the existence of impressions of the kind is necessary to the stability of the doctrine of the sympathetic operation of poisons, that is, of the transmission of their influence from organ to organ along the nerves. Nay, in the instance of very many poisons supposed to act in that manner, we must still further believe in the existence of primary nervous impressions, which are not distinguishable by any local sign whatsoever.¶—CHRISTISON on Poisons.

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*Diseases whose Effects are apt to be mistaken for the Effects of Poison.*

1. *Distention of the Stomach.* Mere distention of the stomach from excessive gluttony may cause sudden death. Generally, indeed, the symptoms and appearances in the dead body show that death is the consequence of apoplexy;

\* Philosophical Transactions, 1811, p. 186.

† Experiments on Opium, 1795, reprinted in his Treatise on Fevers, iv. 697.

‡ Essay on the Operation of Poisonous Agents on the Living Body, 1829, p. 63.

§ Edin. Phys. and Lit. Essays, iii. 311.

|| Recherches sur l'Acide Hydrocyanique, 1819, p. 179.

¶ It is a singular fact, and well worthy of mention, that the poisons which unquestionably act on the sentient extremities of the nerves, and indirectly through the nerves on the brain and spine, do not act at all on the cut surface of the brain and nerves, or upon any part of the course of the latter. This has been proved with respect to hydrocyanic acid, opium, strychnia, and all active narcotics.—Christison, p. 22.



but sometimes not. In order not to break the continuity of my remarks on the diseases of the stomach which imitate poisoning, it may be useful to consider in the present place all the varieties of the effects of distention.

Excessive distention of the stomach, then, sometimes causes sudden death by inducing apoplexy, which is commonly of the congestive kind, that is, without rupture of vessels. MÉRAT has related an instructive case of this kind: A man in good health, while greedily devouring an excellent dinner, became suddenly blue and bloated in the face; a clammy sweat broke out over his body, and he died almost immediately. On dissection, the stomach was found enormously distended with food, and the vessels of the brain were so gorged, that the brain appeared too large to be contained within the skull.\*

But there is reason to suppose that death from distention is the consequence not always of apoplexy, but sometimes also of an impression on the stomach itself. Sir EVERARD HOME relates the case of a child, who, being left by its nurse beside an apple-pye, was found dead a few minutes afterwards, and in whose body no appearance of note could be discovered, except enormous distention of the stomach with the pye. A still more distinct case in point forms the subject of a medico-legal report by WILDBERG: a corpulent gentleman died suddenly fifteen minutes after dinner, and, as he lived on bad terms with his wife, a suspicion arose that he had been poisoned. His wife said that he fell asleep immediately after dinner, but had not slept many seconds when he suddenly awoke in great anguish, called out for fresh air, exclaimed he was dying, and actually expired before his physician, who was instantly sent for, could arrive. Wildberg found the stomach so enormously distended with ham, pickles, and cabbage soup, that, when the belly was laid open, nothing could be seen at first but the stomach and colon. Some white powder was found on the villous coat of the stomach, and it was at first suspected to be arsenic; but it proved on analysis to be merely magnesia, which he was in the habit of taking frequently. The diaphragm was pushed high into the chest by the distended stomach. There was not any particular congestion in the brain. Wildberg very properly ascribed death to simple over-distention of the stomach.† In all such cases the symptoms may be suspicious; but when carefully considered, they can hardly be said to resemble closely the effects of irritant poisoning, and at all events the appearances in the dead body will at once distinguish them.

2. *Rupture of the Stomach* is not a common occurrence, but it sometimes imitates closely in its symptoms the effects of the irritant poisons.

It is generally the consequence of over-distention, combined with efforts to vomit. On account of the abrupt turn which the gullet makes in entering an excessively distended stomach, the cardia or opening of the gullet into the stomach becomes valved, and the contents cannot be discharged by vomiting. A striking case of this kind is related by Dr. LALLEMAND, in his *Inaugural Dissertation at Paris in 1818*: A woman, convalescent from a long attack of dyspepsia, being desirous to make amends for her long privations as to diet, ate one day to satiety. Ere long she was seized with a sense of weight in the stomach, nausea, and fruitless efforts to vomit. Then she all at once uttered a piercing shriek, and exclaimed that she felt her stomach tearing open:

\* Dictionnaire des Sciences Médicales, art. Indigestion, p. 374.

† Praktisches Handbuch für Physiker, iii. 292.

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afterwards she ceased to make efforts to vomit, soon became insensible, and in the course of the night she expired. In the fore part of the stomach there was a laceration five inches long, and a great deal of half-digested food had escaped into the cavity of the abdomen. The coats of the body of the stomach were healthy, but the pylorus, or opening into the intestines, was indurated, which had been the cause of her dyspepsia.

In other cases of death from rupture, the laceration is caused not by the accumulation of food, but by the accumulation of gases arising from depraved digestion, constituting a disease almost the same as that which so often attacks cattle that have fed on wet clover. A singular example of this rare affection, in which death was preceded by the symptoms of irritant poisoning, has been noticed by Professor BARZELOTTI.\*

Another rare variety of rupture of the stomach must also be particularly noticed, because the course of the symptoms imitates very closely a case of poisoning with the irritants. It is *partial rupture*, or laceration of the inner coat only. A very interesting case of that description has been related by Mr. CHEVALIER: A youth of fourteen, on the evening after a Christmas feast, at which he ate and drank heartily, was attacked with violent and frequent vomiting. Next morning he said he felt as if the blood in his heart was boiling; he was unable to swallow, the pulse became irregular, and pressure on the heart or stomach caused excruciating agony. These symptoms continued till the following day, when he vomited two pounds of blood at successive intervals, and soon afterwards expired. The inner coat of the stomach was torn in many places, and that of the duodenum was lacerated almost completely round. No other disease existed either in the bowels or elsewhere.†

Some of the cases now mentioned could hardly, I apprehend, be distinguished from the effects of certain irritant poisons by the symptoms only; but the morbid appearances in the stomach will at once determine their real nature.

Rupture of the stomach, it should be observed, does not always occasion the symptoms hitherto related. Sometimes it causes instant death. Thus, a healthy coal-heaver in London, while attempting to raise a heavy weight, suddenly cried out, clapped his hand over his stomach, drew two deep sighs, and died on the spot. On dissection, a lacerated hole was found in the stomach, big enough to admit the thumb; and the stomach did not contain any food.‡ This case shows that rupture may take place without previous distention.

3. *Rupture of the Duodenum* is a very rare accident from internal causes. The following instance resembles considerably the symptoms of irritant poisoning: A gentleman, forty-eight years old, quarrelled violently with another while playing billiards immediately after dinner; soon afterwards he was seized suddenly with violent pain in the stomach, vomiting, cold extremities, failing pulse, and he died very soon. The mucous coat of the duodenum was found much inflamed, and four inches and a half from the pylorus there was a lacerated hole involving a third of the circumference of the gut.§—*Ibid.*

\* *Medicina Legale*, ii. 22.

† *London Medico-Chirurgical Transactions*, v. 93.

‡ *London Medical Repository*, xvii. 108.

§ *Bulletins des Sciences Medicales*, x. 64.

*On certain Affections of the Bones of the Cranium.* A woman, [aged] forty-eight, about a year before her death, fell down a stair, and received various injuries, especially one on the head, which confined her to bed for some days. From this time her health was bad: she generally complained of fixed pain of the head, and had a very disordered state of the stomach and bowels. She was able, however, to attend to the ordinary duties of her family, till about three weeks before her death, when she was seized with fever and outrageous delirium. These symptoms subsided after a bleeding; and next day she had erysipelas of the face, which went off in a few days. She was then able to be out of bed, but complained of a fixed and deep-seated pain in the right side of the head, a little above the ear, and there was discharge of matter from the right ear. She continued in this state, sitting up part of every day, till three days before her death, when she became comatose, with partial paralysis of the left side, and frequent convulsive motions of the right arm. She died on the third day after the occurrence of these symptoms.

*Inspection.* The cranium was very easily opened, the bones being remarkably soft. On raising the skullcap, the inner surface of the whole upper part of the cranium exhibited a singular state of disease: The inner table seemed to be wanting through its whole extent, and there appeared the rough, irregular, and cancellated structure of the central part of the bone. Betwixt this surface and the dura mater, there was a deposition of soft adventitious membrane of a yellowish colour, varying from one twelfth to one eighth of an inch in thickness. In raising the skullcap, this membrane in some places adhered to the dura mater, leaving exposed the irregular cancellated structure of the bone; and in other places it adhered to the bone, exposing the dura mater of its natural appearance. The parts affected by this singular state of disease were, the frontal bone above the orbital plates, the whole of both parietal bones, the squamous portion of both temporal bones, and rather more than the upper half of the occipital bone. The greatest erosion was on the parietal bones, where several portions were very thin and transparent, and a few points were perforated. The external surface of the cranium was of a natural appearance, except at the few points where the erosion had perforated the bone by very small apertures. In the lower part of the right hemisphere of the brain, towards the posterior part, there was an extensive abscess. The brain in other respects was healthy. On the petrous portion of the right temporal bone, the dura mater was of a dark colour, and detached from the bone; but the bone was healthy.

I find no case described by any writer exactly resembling this remarkable affection of the bone. There was a complete destruction of nearly the whole inner table of the cranium; and in its place a deposition of a soft adventitious membrane, by which the dura mater was everywhere agglutinated to the diseased bony surface. This disease must have been going on for a considerable time; the abscess of the brain was probably recent, and the immediate cause of death. The patient was a respectable married woman, and there seemed no ground for suspecting a syphilitic taint: such a disease, therefore, is probably to be considered as the result of a slow inflammatory action affecting the bone, and gradually destroying it by caries. Such a disease may originate in an injury, or may commence without any obvious cause: it affects most commonly the external table of the skull, though it may likewise affect the internal; but I have seen no case described by any writer in which it was

entirely confined to the internal table. A lady mentioned by Mr. Howship,\* at the age of fifteen received a slight blow on the right side of the head, and for thirty years after was liable to severe headach, which was constantly referred to that spot. She then became drowsy, and her vision was impaired, and at the age of fifty she died comatose. At the seat of the original injury, the bone, to the extent of a crown piece, was so thin from absorption as to be almost transparent. The dura mater at this part was altogether removed, and the brain beneath was of a dark livid colour, and much indurated; and this disease extended through the whole middle lobe. In a case mentioned by DESAULT, death followed a blow on the head after a month; the bone was externally sound, and its coverings were healthy, but the internal table was blackened through the whole extent of one of the parietal bones; the dura mater adhered to the bone as firmly as to the other parts of the cranium, and there was suppuration on the surface of the brain.—ABERCROMBIE *on the Brain*, &c. 2d edition.

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*De Hydrorrhœa Uteri Gravidarum; Commentatio inauguralis.* Auctore  
JOANNES BAPTISTA GEIL, Heidelberg.

The affection treated of in this dissertation consists of a discharge of water from the gravid uterus, which is neither preceded nor followed by contractions, nor by dilatation of the orifice of the womb; disturbing utero-gestation very slightly or not at all, the woman going her full time, and always having the membranes distended in the usual manner during labour. Such discharges are rarer during the early stages of pregnancy, from the third even to the fifth or seventh month, and more common afterwards: the quantity of fluid is exceedingly variable, and sometimes an almost incredible discharge takes place. In some instances this occurs at a sudden gush: in others, the water dribbles away. The profluvium appears once or oftener, at different intervals, sometimes persisting for a long time, increased in quantity by violent excitement of body and mind, and the contrary; the quantity is sometimes greater at night than during the day. The cause of this condition is sometimes peculiar, and again is altogether undiscoverable. Some cases are preceded by no pain; others are preceded or followed by pains similar to those of labour. The fluid effused is generally yellowish, sometimes tinged with blood, and again perfectly limpid. In cases occurring near the full time, the fluid leaves rigid spots upon the clothes, and uniformly gives out that seminal odour peculiar to the proper fluids of the amnios.

Although this peculiar discharge has frequently been observed by very experienced men, it cannot be regarded as at all common; it might easily lead an inexperienced person to believe that abortion was about to occur, or that delivery must necessarily follow without delay. Yet it has happened that such discharges have occurred many days and weeks prior to delivery, and at the proper time the labour comes on, with properly distended membranes, as if no such effusion had taken place.

A great difference of opinion exists among accoucheurs concerning the source of these *false* or *spurious* waters, as they are called, to distinguish them from the waters within the fetal membranes, whose displacement must necessarily be followed by parturition. Some think them to be contained

\* Practical Observations in Surgery and Morbid Anatomy.

between the amnion and chorion, and to flow from a rupture of the latter; others, from a ruptured lymphatic, or a broken hydatid within the neck or body of the womb; others, from a transudation of fluid through the amnion, &c. The opinion first mentioned is the most generally received, because water is found between the chorion and amnion until the third month of pregnancy, and it is thought to be from its increase that such effusions arise. The writer objects to this mode of accounting for the fluid, that in various instances ova have been examined by himself and others, which had no inter-membranous fluid. But we can scarcely attribute much importance to such facts, inasmuch as these ova were thrown off by abortion before examination, and might readily lose any such fluid, either by transuding from the chorion, or by endosmosis passing into the amniotic fluid.

From a view of all the facts, the author concludes that the discharge is from a fluid extravasated between the concave surface of the womb and the external or convex surface of the chorion. When this collection increases to a certain degree, it escapes from the orifice of the womb, in a mass and force proportioned to the operation of the excitement of body or mind which determines it. A clear distinction between discharge of these spurious waters and those from the amnion, is to be derived from the period of their occurrence, the absence of parturient efforts, and undilated state of the month of the womb, as well as the slight, if at all perceptible, change in the abdominal tumor of the patient. Such discharges should cause no alarm to the patient, nor provoke any interference from the midwife.

The causes of this singular flux of water, whatever may be the immediate point at which it is secreted, are to be sought for in the general condition of the patient, her mode of life, habit of body, or the state of the bowels, womb, and adjacent organs. Most commonly it is found to occur in females of rather robust and plethoric habit, in whom full diet and want of exercise determine the secretory irritation in an organ already under a powerful healthy excitement, and relief is readily obtained by reduction of diet and other antiphlogistic measures. The disease occurring in debilitated constitutions will, of course, require an opposite course of treatment.

Dr. GEIL has appended to his dissertation several well-observed cases of this affection, occurring in the experience of Professor NAEFGELE, who has also furnished him with a collection of references to high authorities who have witnessed and recorded such instances.

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*Hydrophobia.* In Graefe and Walther's Journal, we find an account of some interesting experiments on rabid animals, by Dr. HERTWICH. The following are the principal results:

1. Of fifty-nine dogs who were inoculated, fourteen became affected with real rabies.
2. In those cases where the inoculation failed, no assignable cause of the failure could be discovered. There exists, accordingly, a peculiar disposition for the virus of rabies, as for that of other contagious diseases. (A mastiff, four years old, went through regular series of experiments without any effect being produced; while seven other dogs, who were inoculated with him, and in the same manner, became rabid. Some dogs were several times inoculated before any contagion took place; in others, this effect was observed after the first experiment.)
3. It appears, accordingly, that in cases of doubtful rabies, one or two acci-

dental or artificial inoculations are not sufficient to serve as negative proofs of the existence of rabies.

4. No communication of the disease ever took place by the perspiration ; the contagious matter of rabies cannot, therefore, be of a volatile nature.

5. Its vehicle is not only saliva and the mucus of the mouth, but also the blood and the substance of the salivary glands. It does not appear to exist in the nervous pulp.

6. The power of infecting exists at every period of the confirmed disease, and even for twenty-four hours after the death of the animal.

7. The virus of rabies appears to be inactive if administered internally : of twenty-two dogs who were made to swallow it, none took the disease.

8. The application of saliva to fresh wounds appears to be as often followed by rabies as the bites of rabid animals.

9. It is, consequently, beyond all doubt that the disease is neither produced by the lesion, according to GIRARD's opinion, nor by the fear of the patient, as has been repeatedly asserted.

10. The opinion of BADER and CAPELLO, that in dogs who had become rabid from the bite of an animal primarily affected with the disease, the saliva did not contain the contagion; and that it existed only in primary rabies, has been proved, by several experiments, to be erroneous. (This particularly agrees with MAGENDIE's experiments, who, having inoculated a dog with saliva of a patient affected with hydrophobia, the animal became rabid after a month, and bit two others, who were also infected : from these last no further contagion was observed.)

11. During the period of the inactivity of the virus, there are no morbid alterations observable, either locally or in the general health of the dog thus infected, nor does the lower surface of the tongue ever exhibit vesicles. There exist, accordingly, no precursory symptoms, as in other contagious diseases.

12. The disease generally breaks out within fifty days after the inoculation, or the infliction of the wound : Dr. Hertwich never observed it occur at a later period.

13. Inoculation or infection from animals affected with fierce rabies very often produces the other modification of the disease, and vice versa; they are, consequently, only different forms of one and the same disease.

14. It is an erroneous opinion that healthy dogs are able to distinguish those affected with rabies by the smell; this is not the case; nor do they abhor food mixed with the secreta or excreta of rabid dogs.

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*Curious Case of Metastasis occurring in a Woman during Lactation.* By Dr. F. FRANCHINA. (*Giorn. Anal. di Med.* for December 1828, and February 1829.)

A nurse went to Milan for the purpose of getting a child to suckle; the following day, having obtained a male infant, she took it home with her. On her way, she nursed it several times, and also in the evening after her arrival at home; but, on the night following, she all at once felt as if a fluid descended from the breast to the abdomen, and shortly afterwards she voided by stools and urine a milky humor, which, according to the statement of the woman, presented all the characters of pure milk. This evacuation continued all night, to such an extent as to fill two urinals. In the mean time, and in

one night, the milk disappeared from the breasts, so that it was no longer possible for the infant to get another drop. The following days these abnormal milky evacuations continued, but in less quantity. At length, after disappearing completely for twelve days, the milk returned to the breasts as regularly as before, and the woman resumed again the nursing of the child, which she had confided to the care of another nurse.

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*Phlegmonous Abscess of the Prostate Gland.* By M. CHATEAUSUF. (*La Clinique.*)

A man, forty years old, complained for several days of pain in the perineal region, but principally near the anus. When he consulted M. C., he had almost an incessant desire to go to the water closet, and to make water, which he had great difficulty in passing. After some time it appeared that the stream of urine had overcome some obstacle, and the water passed freely, but caused in the passage a burning sensation in the urethra. M. C. introduced his finger into the rectum, and felt, through the anterior part of the intestine, a large hard tumor, which was painful to the touch. From the situation and feel of the tumor, it was evident that it was phlegmon of the prostate.

Leeches and emollient poultices to the part, the warm bath, and low diet, were ordered. In the course of a few days, pus was discharged by the anus and urethra, and the pain was subsequently much less. The urine was still voided with much difficulty. Intestinal gas and a worm were discharged from the urethra. The discharge of matter soon ceased. No bad symptoms afterwards appeared, and the patient was quickly capable of bearing laborious employment.

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PRACTICAL MEDICINE.

*Means of suspending the Secretion of Milk.* M. RANQUE, chief physician of the Hôtel Dieu of Orleans, employs with success, to diminish the sensibility of the mammary gland, upon which the secretion of milk depends, frictions morning and evening upon the breast with the following liniment: R. Laurel water ℥ij.; Sulphuric Ether ℥i.; extract of Belladonna ℥ij. He prescribes at the same time rigid diet and anodine drinks.

M. R., it is said, employs this liniment with success in engorgements of the testicles, after using antiphlogistics.—*Journal des Progrès.*

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*Treatment of Epilepsy.* By Dr. BORIE. (*Lancette Française*, Janv. 1830, No. 88.)

Considerable success appears to have been obtained from the following plan of treatment.

*Preparatory measures.* 1st. Two ounces of blood are to be taken from the feet. 2d. Four days after, a grain of Tartar emetic is to be given in any mild fluid. 3d. Four days after this, an ounce of castor oil in a vegetable broth. 4th. After the lapse of the same time, four grains of calomel are to be taken in a pill, with a cup of infusion of *Polypodium filix mas*.

*Treatment.* 1st. Twenty drops of distilled Lauro-cerasus are to be taken in sugar and water; the dose being increased one drop each day till it amounts to sixty, and then to be discontinued. 2d. At bedtime, two drachms of

powder of Wormwood\* in a glass of infusion of Linden wood. 3d. Every fifteen days, a moxa to be applied upon the spinal column, commencing on the cervical region. Six moxas will be sufficient in most cases. 4th. The patient constantly to wear a magnetic bracelet upon the left arm, which is to be firmly tightened upon the approach of a paroxysm. 5th. The lower extremities to be briskly rubbed with ether twice a day.

*Regimen.* 1st. To wear flannel habitually next the skin; to bathe in fresh or salt water, plunging in head foremost. 2d. Exercise in the open air, avoiding exposure of the head to the rays of the sun. 3d. To avoid all mental excitement and causes which are likely to debilitate the body, especially onanism or venereal indulgence. 4th. Diet, vegetables and water.

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*Paralysis of the Face from an Affection of the Portio Dura, cured by Galvanism.*  
By M. H. MONTAULT. (*Revue Med.*)

For some days the patient had experienced a lancinating and remittent pain behind the right ear, and during the last three days the tears were not absorbed by the lachrymal punctæ of the right eye, and flowed over the face. Shortly afterwards, paralysis of the right side of the face occurred. During the act of laughing, whistling, or masticating, the left commissure of the lips was always drawn upwards and outwards, whilst the right was distended and entirely passive. The right eye was constantly exposed, as the eyelids on that side could not be closed. The skin of the forehead and upper part of the nose, on the right side, was perfectly motionless, whatever grimaces the patient attempted to make. Neither feeling, sight, hearing, nor taste, were affected on either side. The cause of this attack could not be satisfactorily ascertained. From bleeding locally and generally, mustard sinapisms, stimulating enemata, fomentations, &c., and a strict attention to diet, no relief whatever was derived. In a week from the attack, the patient could neither articulate nor masticate.

MM. SALANDIÈRE and PICHONNIÈRE were consulted, as they had paid much attention to the treatment of such diseases by means of electricity, galvanism, and acupuncture. They predicted a speedy cure. The part was electrified by sparks and shocks, and immediately afterwards four or five needles were introduced; one at the exit of the facial nerve, and others upon its branches. Two of the needles were connected, by means of a metallic conductor, with one of the poles of a galvanic pile of thirty plates. The three other needles were made to communicate, by the same means, with the opposite pole. When the pile was charged with nitric acid, severe pains and slight motion were produced; but, when charged with hydrochloric acid, the sensation caused was much less acute, and the muscular contraction was the principal phenomenon which followed. The patient submitted to this discipline for seven days; from twenty minutes to half an hour each time. In a few days he was entirely cured: the natural appearance and action of the parts were perfectly restored.

\* It is upon this part of the treatment the author chiefly relies. In Sweden and other parts of the continent, wormwood is considered a specific against epilepsy. We have tried it in two cases, which appeared favorable for such a remedy, without any effect.—EDITOR.



*On the Use of Acetate of Lead in Ulcerated Phthisis.* Dr. LENZ considers the acetate of lead as a true panacea in chronic pneumonia which was gone on to ulceration. Dr. Schneider, of Ettenheim, is also said to have employed the remedy in this disease, with success. The medicine is given in powder, combined with opium; the dose gradually increased. A patient who was cured by Dr. Lenz, took two drachms in thirty-two days; and Dr. Schneider has often given fourteen grains in one day, without producing the least ill effects.—*Heidelb. Klinische Annalen.*

*Warts cured by the Decoction of Tormentilla.* Mr. TYRRELL has for two or three years been employing a decoction of tormentilla root, as an application to the warts so common and usually so troublesome about the glans penis and prepuce. The form is as follows: R. Pulv. Radicis Tormentillæ ʒj.; Aq. ferventis ℥ss. deim cola. The surface of the affected part should be well cleansed, three or four times a day, with tepid water, and otherwise kept constantly covered with a piece of lint saturated with the decoction.—*Med. Gazette.*

*Case of Bronchocele relieved by Iodine. Effects of this Medicine on the Genitals.* A young man, æt. eighteen, of a lymphatic constitution, had, from his fifteenth year, when he attained to puberty, been affected with bronchocele, which soon reached such a size as to produce considerable dyspnoea, and frequent attacks of suffocation and hoarseness. Being admitted into the Hôtel Dieu, the tumor was found so large as to occupy the whole space between the middle of the neck and the clavicles; it was formed of two lobes, and was lifted up by the pulsation of the carotids; in its substance, also, an alternating enlargement was visible during the arterial expansion. The general health of the patient not being affected, he was put under a course of iodine, of the tincture of which he took from six to ten drops daily. The tumor gradually subsided, its lobes became more distinct, the voice more natural, and the difficulty of respiration ceased altogether. It was worthy of remark, that, under the use of iodine, the genitals became, as it were, atrophic; and that erections and pollutions, to which the patient had formerly been very subject, were never observed during this time.—*La Clinique.*

#### SURGERY.

*Complete Amaurosis cured by the Extraction of a diseased Tooth.* (GRAEF, *Journ. der Chirurgie*, &c. vol. xii. cah. iv.)

F. Przesmycki had always enjoyed good health, with the exception of occasional attacks of rheumatic headach and pains in the joints. In the autumn of 1845, he was suddenly attacked with shooting pains in the upper jaw of the left side, which extended to the eye. These violent pains, which were supposed to arise from cold, lasted several days, and then subsided; but returned periodically. A short time afterwards the pain returned with more violence, and again were incessant. The sight of the left eye was completely destroyed. Various modes of treatment were applied without benefit, and after eight months the left cheek had swollen; and, one night, several spoonfuls of bloody pus was discharged from between the conjunctiva and the eyelids of the left eye. The pain now diminished, but extended to the temple; blindness continued. At the expiration of three weeks there was another discharge of pus, and it was occasionally repeated during the next six months.

Professor GALENZOWSKI was now consulted. He conceived that the pus had formed in the maxillary sinus, and made its way along the orbital part of the superior maxillary bone; but knowing also that suppurations of the upper jaw frequently depend upon carious teeth, the mouth of the patient was carefully examined, and a rotten tooth was found corresponding to the antrum of Highmore. This tooth was extracted to give exit to the matter; and, much to the astonishment of the surgeon, there was found fixed to its root a splinter of wood, about three lines long, and as thick as the head of a pin. A probe introduced through the alveolar process penetrated into the sinus, and gave issue to a few drops of pus. In nine days the patient entirely regained his sight, after having been deprived of it for more than eighteen months.

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*Excision of the Tonsils.* Catherine Cunningham, æt. twenty-four, a servant in town, was admitted on 26th August on account of sore throat and deafness. On examination I discovered a very large swelling of the tonsils, which sufficiently accounted for both her complaints. I cut away the projecting portion on both sides by means of a hook and scissors, immediately after which she recovered her hearing, and ceased to be troubled with the uneasy symptoms in her throat.

Chronic enlargement of the tonsil is a very common disease in cold moist countries such as this, and the inconvenience which proceeds from it is no less complicated than distressing. The faculties of speech, smelling, tasting, and hearing, are all more or less affected, besides the constant uneasiness which is caused by the presence of a hard swelling in the throat, and the frequently recurring annoyance of inflammation in the morbid growth. It is therefore a fortunate circumstance that surgery affords a ready and certain mode of relief, viz. excision of the tumour. In doing this it is not necessary to remove the whole of the swelling, since the new actions, which are induced by the abstraction of a part of it, generally suffice for curing the remainder. The operation, therefore, is perfectly safe and easy; indeed, even granting that it were necessary to remove the whole of the tumor, the operation would still be attended with hardly any danger, since the carotid artery, which is the grand source of apprehension, runs parallel with the direction in which the incision ought to be made.—From Mr. SYME's *Quarterly Report of the Edinburgh Surgical Hospital*.

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*Fracture of the Leg, treated by Baron LARREY's Plan.* M. LARREY lately presented to the Royal Academy of Medicine a hussar who had fallen from his horse, and broken both bones of his leg, and luxated the first metatarsal bone. The skin of the sole of the foot was lacerated, and the metatarsal bone projected through the wound. Amputation appeared almost inevitable; but M. Larrey determined to avoid, if possible, so serious an operation. He extended the wound, removed the metatarsal bone, and then brought the edges of the wound together, and covered it with a compress and pledgets dipped in a balsamic ointment; after which he reduced the fracture of the leg, and placed it in his apparatus without splints. The wound of the foot was not dressed for twenty-eight days, and the leg was not touched for fifty-one days. At the end of this time the parts were perfectly united; the foot had recovered its natural shape, with the exception of the depression which was the

necessary consequence of the removal of the metatarsal bone. The motions of the foot were not perfect, but the man was daily recovering the natural use of the limb.

#### MATERIA MEDICA.

*On the Effects of Camphor in a Healthy Individual.* By Dr. LUCAS SCUDERY, of Nossina. (*Annali Universali di Med.*)

It is extremely difficult, from the difference of action of the same medicine upon different individuals, the age, sex, constitution, &c. of the individual influencing the effects, to arrive at any general results. The following experiments on camphor appear, however, to have been made with great care; they were performed in the presence of several persons, who themselves submitted afterwards to experiment; so that confidence may be reposed in the results.

From ten to fifteen grains of camphor taken in the stomach, produces in from fifteen to twenty minutes a decided acceleration with increased force of the pulse, which continues permanent for one or two hours. There are produced, at the same time, redness of the face, dryness of the skin, headach with vertigo, increased sensibility to light, and brightness of the eyes; injection of the conjunctiva; stricture of the chest; odour of camphor in the breath; desire to urinate; urine smelling of camphor, passed in small quantities, and producing a burning in the urethra; constipation. These symptoms generally disappear at the end of about four hours; during the night the sleep is disturbed by voluptuous reveries, with erection of the penis, and pollutions. These effects, which were produced in five successive experiments, were more decided when the camphor was taken dissolved in alcohol; their intensity was also in proportion to the increase of the quantity taken; its effects were also then more prolonged, and accompanied with feverishness. M. S. has swallowed progressively as much as two scruples of camphor at a time, in many experiments. Drs. Pasquali, Mazzetti, and Gassoni, repeated these experiments, and with the same results.

A month after these experiments, Dr. Scudery wishing to ascertain what modification nitre would produce in the action of camphor, swallowed two scruples of the latter article, and five minutes afterwards he took two drachms of nitre dissolved in water. He experienced almost immediately afterwards nausea, with chilliness, and an abundant salivation. In about ten minutes the pulse lessened, but before twenty-five minutes, it had acquired new force; there supervened slight headach, confusion of ideas, the pain in the head gradually augmented, the light appeared stronger than natural, and objects clearer; the conjunctiva was injected; face warm; desire to urinate; pulse vibratory and frequent. In this state, Dr. S. took another solution of two drachms of nitre: immediately afterwards the nausea reappeared, but the headach and other phenomena disappeared: after some minutes it reappeared, but slightly. Half an hour afterwards, he passed a small quantity of urine with pain; pulse natural; during the remainder of the day no phenomena appeared, he passed a calm night; urine abundant, and depositing a sediment; he had two alvine evacuations. These experiments like the preceding, were frequently repeated with different doses of nitre and camphor; and Mr. Mazzetti also made some trials with them.

From all these experiments, Mr. Scudery concludes, 1<sup>st</sup>. That, in the dose

of from eight to ten grains, camphor produces in a healthy man scarcely any appreciable effect; and that in diseases it should be given to the extent of two scruples, but in divided doses. 2d. That one of the effects of camphor upon the system, is to produce an excitation, characterised by an acceleration of the circulation, and an elevation of animal heat. 3d. That it produces no irritation of the gastro-intestinal mucous membrane; that it excites neither pain nor porporygmus, but that it constipates. 4th. That it acts specially upon the genito-urinary organs, augmenting the energy of their functions; voluptuous reveries, erection of the penis, sensation of heat in the urethra when urine is voided, are proofs of its stimulating action. 5th. That vertigo, the vivid impression of light on the eye, headach, acceleration of the circulation, and excitation of the genito-urinary organs, &c. announces that camphor acts directly upon the brain and the great sympathetic. 6th. That the stimulating effect of camphor is augmented by uniting it with another stimulant, as alcohol; whilst nitre, on the contrary, diminishes its stimulating properties.

#### MIDWIFERY.

*Gestation prolonged beyond the ninth Month.* DR. ALBERT, of Wiesentheid, has published in the *Zeitschrift für die Staatsarzheykunde*, iii. tes 1828, an account of two cases of this kind. In one, gestation was prolonged forty-three, and in the other thirty-three, days beyond the ordinary period.—*Arch. Gen.*

#### MISCELLANEOUS.

*Prize Question.* The Medical Society of the département of the Seine propose the following question. Memoirs to be addressed “dans les formes académiques,” to M. Nacquart, secretary to the Society, rue Saint-Avoye, No. 39.

To determine, by clinical observation, by experience from morbid anatomy, or by a series of experiments, the condition of the blood in diseases: to indicate the primary and secondary alterations of which the blood is susceptible, and the influence which they respectively exert in diseases.

As the Society are perfectly aware of the difficulties of the subject, it is determined to admit papers which treat only of one part of it; e. g. a description of any one kind of alteration of the blood in any one disease. Such communications will either be allowed to share the prize, or be recompensed with medals, according to their merits.

*Buccina; new Principle in Box-wood.* An apothecary of Bordeaux announced to the Pharmaceutical Society of Paris, at its last sitting, that he had discovered in the wood, and particularly in the bark of the box tree, an alkaline principle, to which he gives the name of Buccina. It is in the form of powder, and neutralizes acids, forming uncrystallizable salts: it has a very strong sudorific action and bitter taste. M. DUPETIT THOUARS, in making this statement at the Philomathic Society, remarked that buccina might perhaps be advantageously used in the manufacture of beer; “for there is more box-wood than hops employed in making almost all the beer brewed in Paris.”—*New Mon. Mag.*

*Another Duplex Child.* Mr. WM. MORGAN, M.R.C.S.L., of Carnarvon, has published, in the last Number of the Medical Gazette, an account of a poor woman, the wife of W. Thomas, a quarryman, residing near Llanberis, in his neighbourhood, who was, on the 28th of March last, delivered of a duplex female child, still-born, which had two heads, two necks, four arms, two pelves, four thighs and legs, all perfectly and naturally formed. The two trunks were united at the breast-bones, and the union extended as low as the umbilicus, where it terminated in one umbilicus common to both. Their union was so remarkably firm that, from the examination, it appeared to be of bone: suffice it to say that, at their union, Mr. Morgan could not separate them the space of a line. It appears evident that their faces, and the fore parts of their bodies, were fronting each other. The midwife in attendance reports that they were born with their arms around each other's necks. From a careful external examination, (for Mr. Morgan was not permitted to make any other,) there appeared no reason why they should not have lived. It was evident they were of the full growth of the usual term of utero-gestation. The mother fancies they perished about a week before her accouchement. They measured in length seventeen inches and a half, and were supposed to weigh about nine pounds. Their features much resembled each other, but the hair of the head of one was somewhat darker than that of the other.

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*On the Presence of Hydrocyanic Acid in the Human Body.* It is well known that hydrocyanic acid exists in many vegetables; that it is contained in the essential oil of the laurel, bitter almond, &c. It yet remains to be positively determined whether the animal body also contains this principle, either in a state of health or disease. From some experiments, which are still imperfect, it would appear that this fact is not improbable. Many observers have declared that they have detected this acid in the organic structure of some of the inferior animals; and TIEDEMANN and GMELIN have discovered it in the saliva of a man, and in that of a sheep. WOEHLE also concludes from his experiments, that urea is composed of a cyanate of ammonia.

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## INTELLIGENCE.

### MR. WALLER'S OBSTETRICAL PRIZE.

THE public examination prior to the presentation of this prize took place in the Theatre of the Aldersgate street School, on Saturday, April 24th. It lasted for upwards of four hours; at the expiration of which period, Mr. W. J. E. WILSON, of Greenhithe, Kent, was declared to be the successful candidate. The examination was conducted by the lecturer himself, and Messrs. WATSON, DOUBLEDAY, and RUSHFORTH, (three medical practitioners,) acted as umpires on the occasion. The answers to the questions proposed, which embraced the principal points connected with the art and science of midwifery, were highly creditable to the pupils, and must have been equally gratifying to the teacher.

## HUNTERIAN MEDAL.

We are requested to say, that the competition for the prize offered by the Hunterian Society for the best essay on Tubercular Affections, is not limited to members.

## LIBRARIAN TO THE KING.

The late Dr. GOOCH was the first member of our profession who held the office of librarian to the King. The vacancy occasioned by his death has just been filled up by the appointment of Dr. MACMICHAEL; and we have pleasure in mentioning the nomination of that gentleman, both because an honourable mark of distinction is thus retained in the profession, and because it is bestowed on one whose accomplishments and character entitle him to the respect and esteem of his brethren.—*Med. Gaz.*

Dr. ROBERT LEE, physician to the Brownlow street Hospital, has been elected a Fellow of the Royal Society.

SAMUEL BROUGHTON, Esq. surgeon to the 2d Regiment of Life Guards, and the St. George's and St. James's Dispensary, has been elected a Fellow of the Royal Society.

## OBITUARY.

*Sketch of the Professional Character of the late WILLIAM LISTER, M.D.  
formerly Physician to St. Thomas's Hospital.*

THIS estimable physician, after maintaining a deservedly high reputation in this metropolis for nearly half a century, died at his house in Lincoln's Inn Fields, on the 3d of January, 1830, aged seventy-three years.

Dr. Lister possessed an acute and vigorous understanding, which had early received the culture of a liberal and extended education. His deep and solid attainments, both in philosophy and in the classics, formed an admirable basis for studies more directly of a professional nature. These he afterwards pursued in the university of Edinburgh, with such persevering ardour and success as to acquire a high character for his knowledge of medicine and the collateral sciences. He took an extensive range in study, and always continued to retain an attachment to general science; and it is worthy of remark that, to the very last, he continued to keep pace with the improvements of the day, and, even in chemistry, to make himself intimately acquainted with the rapid progress of discovery. So great a love also did he cherish for classical literature, that, until within a short time of his death, he was accustomed, in the intervals of professional duty, to which he conscientiously devoted a large portion of his time and energy, to recreate himself with the poets and historians of Greece and Rome. Nor did he discover any diminution of interest in the science of mind, on which he continued to read with the same deep attention and eager spirit of inquiry which had characterized the investigations of his early collegiate life.

Notwithstanding, however, this steady attachment to general science and literature, in which his acquirements were not less extensive than profound, Dr. Lister constantly made his profession the principal object of attention. Few individuals, perhaps, have possessed a constitution of mind better

adapted for the prosecution of medical inquiry. An acute perception and great power of attention were united with a sound and discriminating judgment, by which he was enabled to view a subject in all its bearings, carefully separating what was essential from that which was merely accidental and adventitious, and generally deducing from the whole a correct and logical conclusion. So thoroughly and patiently, indeed, did this indefatigable physician investigate the more obscure forms of disease, as seldom to have occasion to amend his opinion or retrace his steps. Like his intimate friends, Dr. Baillie and Mr. Cline, he was accustomed to express his view of a case in a few clear, forcible words, and in a manner simple and unadorned, yet calculated to impress the hearer with a conviction of the value and correctness of the opinion.

Dr. Lister's practice exactly corresponded with the clearness and decision of his mind, evincing an equal degree of simplicity and of energy; and thus enabling him to ascertain, with considerable accuracy, the progress of the disease and the effects of the remedies.

Nor would it be proper to omit a special reference to those sterling moral qualities, which were not less conspicuous and influential than his intellectual endowments. Uncompromising integrity and genuine disinterestedness were strikingly observable in his whole character. The welfare of his patients and friends, rather than his own individual interest, appeared to be the predominating principle of action. He had a just conception of what belonged to the character of a physician, and always maintained, by example as well as by precept, the dignity and value of his honourable profession.

With such principles and such conduct, it is not surprising that Dr. Lister should have inspired, in the minds of those who had the privilege of his friendship, a high degree of respect and attachment; although, from a rooted aversion to every thing like pretension and display, his manner may have appeared to strangers cool and unattractive. Those, however, who knew him intimately had abundant proofs of the tenderness and depth of his feelings.

With a mind so well stored and disciplined, and with opportunities and habits of observation so favorable to research, it is to be regretted that Dr. Lister should have written comparatively little. The specimens of biography given in the *Gentleman's Magazine* for November 1817, and October 1823, containing short memorials of two of his most beloved and intimate associates, viz. Dr. WILLS and Dr. BAILLIE, sufficiently prove how admirably he was qualified for literary undertakings.

But to the most able and diligent, as well as to others, "there is a time to die." Dr. Lister contemplated that important change with remarkable composure. During the last thirty years of his life, indeed, he had suffered repeated attacks of angina pectoris, and had a constant persuasion of being himself the subject of organic disease about the heart. Of this settled and deliberate conviction he could not divest his mind, notwithstanding the remonstrances of his brethren, especially of his intimate friend Dr. WILLS, who laboured to persuade him he was merely hypochondriacal: yet the post-mortem appearances decisively prove that Dr. Lister's usual judgment did not forsake him even in the consideration of his own individual case.

Among the papers examined after his death, a memorandum was found, dated December 20, 1821, in which he details the principal symptoms of his complaint, and his opinion of their nature, concluding with the following direction: "To ascertain the truth of the above conjecture, and to recommend

the practice of post-mortem examinations by an example in my own person, I desire that my excellent friend, Mr. J. H. GREEN, may be requested to make a complete examination of me as soon after my death as he thinks desirable, and to furnish my son Nathaniel\* with a statement of all he observes." In accordance with this request, an accurate inspection was made by Mr. Green, which remarkably confirmed the opinion which the deceased had entertained of the nature of his disease. The valves of the aorta, as well as various portions of the aorta itself, were ossified, as were also the coronary arteries. The mitral valves were also partially ossified, and the tricuspid passing into the same state. There was hypertrophy of the left ventricle; and adhesions had formed between the heart and pericardium. A large quantity of serum was contained in the cavities of the pleura. The internal carotid arteries were ossified, and the vertebral arteries thickened.

Notwithstanding occasional paroxysms of agonizing pain, Dr. Lister steadily pursued his usual avocations, and actually visited his patients until two days preceding his death. He had suffered, however, exceedingly during the severe weather of January last, both from difficulty of breathing and general uneasiness about his chest. Towards the evening of Tuesday, symptoms of effusion more distinctly appeared; and on the morning of Wednesday, surrounded by his numerous and affectionate family, and in the full possession of his mind, this venerable man gradually ceased to breathe.

T. H. B.

*Brunswick square; April 7th, 1830.*

The celebrated S. T. VON SOEMMERING, who maintained so high a rank as an anatomist and physiologist, departed this life at Frankfort, on the 2d of March, in the seventy-sixth year of his age.

#### BIBLIOGRAPHICAL NOTICES.

Dr. JAMES CLARK, *on the Influence of Climate, &c.*

But a very short time has elapsed since the first appearance of this work, and a second edition is already published. The author has carefully examined the principal places in England frequented by invalids, and he has materially improved the account formerly given of those places. The article on England, indeed, has been wholly rewritten. To the only article on the climate of the Northern Atlantic in the former edition, (that on Madeira,) Dr. Clark has in the present added a few observations on the principal islands in that ocean occasionally resorted to by invalids from Europe. A good account is also given of the WEST INDIES. As a proof of the utility of this work, we may observe that Dr. Clark has recently received letters from Madeira and Nice, stating that the cases sent to these climates during the last season have been better selected than on any former occasion. The second edition contains nearly 100 pages more than the first.

It is needless to say that the work, in its improved state, deserves still higher praise than that we bestowed in our review of the first edition. This is one of the few medical works that will be perused with as much interest by the general as the professional reader.

\* Then a student in medicine, but now M.D.



*A Manual of Descriptive Anatomy of the Human Body; illustrated by Lithographic Plates.* By J. CLOQUET. Translated from the French by THOMAS KING, late House Surgeon to the Hôtel Dieu, and Lecturer on Anatomy at the Aldersgate-street Medical School.

The celebrity of CLOQUET as an anatomist is well known, and his *Manual* is considered to be one of the most valuable and instructive works of the present day. In Mr. KING he has a very able translator, from his intimate knowledge of the language, and his perfect acquaintance with the science of anatomy. In its original language, this excellent work could have been but of little use to the majority of English students; who, however capable they may generally be of reading the French language, would fail in perfectly comprehending the relative technical terms. Mr. King's translation possesses a double advantage: the original text and the English translation are given in separate columns, and thus the student, while he is perfecting himself in anatomy, will at the same time make himself master of the French anatomical terms, which he could scarcely do by any other mode of instruction.

The work is to be published in a series of parts; and, from the excellence and accuracy of the illustrative plates, and the descriptive text, of the first part, which we have received as a specimen, we warmly recommend it to our junior brethren, and to those who are desirous of renewing their lost anatomical knowledge.

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*Lectures on Practical and Medical Surgery.* By THOMAS ALCOCK.

In this work the student will find much wise and sensible counsel respecting his surgical education and professional conduct. The remarks of the author on the investigation of disease are very judicious; and the comments on the occasional ill consequences of venesection, and on bloodletting from the veins of the lower extremity and from the external jugular vein, deserve particular attention. A very interesting outline is also contained in the work of the general anatomy of the mucous membranes. The regulations proposed by Mr. Alcock for the guidance of his pupils in the performance and explanation of a series of surgical operations, are well calculated to further the grand object of professional improvement.

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Dr. UWINS will publish, in the course of a few days, a pamphlet on "Nervous and Mental Disorder," with especial reference to recent investigations on the subject of Insanity.

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Dr. URX has in the press a new edition, nearly rewritten, of his Dictionary of Chemistry.

## MONTHLY LIST OF MEDICAL BOOKS.

*[Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]*

The Influence of Climate in the Prevention and Cure of Chronic Diseases, more particularly of the Chest and Digestive Organs: comprising an Account of the principal Places resorted to by Invalids in England, the South of Europe, &c.; a comparative Estimate of their respective Merits in particular Diseases; and General Directions for Invalids while travelling and residing abroad. With an Appendix, containing a Series of Tables on Climate. By JAMES CLARK, M.D. &c. SECOND EDITION, enlarged.—8vo. pp. 400. Underwood, London, 1830.

Addresses delivered on various Public Occasions, by JOHN GODMAN, M.D. &c. Containing a brief Explanation of the Injurious Effects of tight Lacing upon the Organs and Functions of Respiration, Circulation, Digestion, &c.—8vo. pp. 194. Carey, Philadelphia, 1829.

Medical Botany, No. XL. April 1830. By JOHN STEPHENSON, M.D. F.L.S. &c. and J. M. CHURCHILL, F.L.S. &c.

This Number contains excellent plates and descriptions of the Scilla Maritima, Pimpinella Anisum, Amyris Gileadensis, Copaifera Officinalis, and Papaver Somniferum.

A Practical Essay on the Disease generally known under the Denomination of Delirium Tremens; written principally with a View to elucidate its Division into distinct Stages, and hence to simplify its Method of Cure. By ANDREW BLAKE, M.D. &c.—Pp. 68. Burgess and Hill, London, 1830.

A Treatise on Deformities; exhibiting a concise View of the Nature and Treatment of the principal Distortions and Contractions of the Limbs, Joints, and Spine. Illustrated with Plates and Woodcuts. By LIONEL J. BEALE, Surgeon.—8vo. pp. 248. Wilson, London, 1830.

A Letter to WILLIAM LAWRENCE, Esq. F.R.S. on the Nature and Causes of Intellectual Life and the Mind. By WILLIAM ADDISON, Member of the Royal College of Surgeons in London.—8vo. Underwoods, London; and J. Knib, Worcester, 1830.

A Manual of Descriptive Anatomy; illustrated by Lithographic Plates. By M. CLOQUET. Translated from the French, by THOMAS KING, late House Surgeon to the Hôtel Dieu, and Lecturer on Anatomy at the Aldersgate-street Medical School. Part I.—Dumus and Co. Leicester square, London, 1830.

Surgical Observations on the more important Diseases of the Mucous Canals of the Body; being a second Edition of the Author's Treatise on Stricture of the Urethra. To which are added, Practical Observations on Contraction of the Œsophagus and Rectum; an Essay on the Diagnosis of Hernial and other Tumors in the Groin; with Remarks on Tracheotomy, as connected with the Treatment of Chronic Laryngitis. By G. MACILWAIN, Surgeon to the Finsbury Dispensary, &c.—8vo. pp. 337. Longman, London, 1830.

Analytical Anatomy. Great Sympathetic Nerve. By P. J. MANEC, D.M.P. &c. Folio Plate.—Dumus and Co. Leicester square.

Immense labour must have been bestowed upon this plate, but we very unwillingly state that we cannot conscientiously recommend it as a study. From the number of minute parts that are contained in it, numerous letters and figures of reference are required, which are necessarily so close together as to render the whole complicated and perplexing. The task of making out the different parts would be very laborious, and we fear almost impracticable.

An Introductory Lecture to the Theory and Practice of Midwifery: being an Historical Account of that subject, publicly delivered in London, October 4th, 1829. By THOMAS GREENING, M.D. &c.—London, 1830.

A Clinical Report of the Royal Dispensary for Diseases of the Ear; with Remarks on the Objects and Utility of the Institution. By J. H. CURTIS, Esq. &c.—8vo. pp. 53. Longman, London, 1830.

### METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

March	Rain gauge.	Moon.	Thermom.			Barometer.		DeLuc's Hygrom.		Winds.		Atmospheric Variations.		
			9 a.m.	noon.	5 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	2 p.m.	10 p.m.
20			49	56	43	30.00	30.07	56	56	W	WNW	Fine	Fine	Fine
21			47	55	44	.07	.05	57	58	SW	SW	—	—	—
22			48	58	47	.04	29.78	58	60	W	SW	—	Cloudy	Sleet
23			58	55	48	29.92	.92	60	58	WNW	WSW	Cloudy	—	Cloudy
24			53	55	44	.97	30.10	58	58	W	NW	Fine	Cloudy	Fine
25			55	60	49	30.21	.28	58	67	W	W	—	Fine	—
26			57	62	49	.40	.48	55	55	W	W	—	—	—
27			54	63	47	.44	.36	51	51	W	W	Foggy	—	—
28			58	69	41	.24	.11	50	49	SE	SE	Fine	—	—
29			50	60	47	.09	29.95	49	49	S	SSW	Foggy	—	—
30			55	62	42	29.90	.86	49	51	SSW	ESE	Fine	—	—
31			45	56	32	.06	.60	51	53	ESE	NE	Foggy	—	Cloudy
April 1			48	40	35	.57	.60	57	63	NE	E	Rain	Rain	Sleet
2	.62		38	39	36	.34	.23	67	74	E	NE	Sleet	Rain	Mist
3	.76		38	40	32	.09	.70	80	76	N	W	Sleet	Cloudy	Fine
4			38	41	31	.86	.97	69	60	NW	NW	Fine	Fine	Fine
5			35	42	33	30.05	.89	62	59	NE	WSW	Foggy	—	—
6			41	50	41	29.66	.69	57	56	W	WNW	Fine	—	—
7			44	55	42	.74	.69	59	56	WSW	SW	Cloudy	—	—
8			58	63	46	.48	.39	58	54	S	S	Fine	—	—
9			55	62	45	.37	.32	59	56	SSW	SSW	—	—	Rain
10			50	52	43	.30	.32	54	57	W	SW	Cloudy	Cloudy	Cloudy
11			49	55	47	.47	.36	57	59	SW	SW	Fine	Rain	Cloudy
12	.55		52	56	48	.32	.46	59	58	WNW	W	Cloudy	Cloudy	Fine
13			53	57	44	.64	.80	57	54	W	WNW	Fine	Fine	—
14			54	59	50	.90	.84	54	53	WNW	SW	Foggy	—	Cloudy
15			54	60	52	.66	.57	52	57	SW	SW	Sleet	Cloudy	Cloudy
16	.15		60	62	53	.50	.60	61	62	W	WSW	Cloudy	Cloudy	Cloudy
17			58	61	54	.54	.57	62	59	SW	W	Cloudy	Show'ry	Show'ry
18			59	63	47	.52	.50	59	57	WSW	WSW	Fine	Fine	Fine
19			57	59	45	.49	.61	55	58	W	W	Cloudy	Cloudy	—

The Rain gauge having been damaged by the late frost, the quantity for March cannot be given.

### NOTICE TO CORRESPONDENTS.

The Editor informs Dr. A. that there is no work which treats exclusively of the subject. COLLINSON on the Law of Lunacy, and WRIGHT's Reports of Lord Eldon's Judgments and Decisions, contain some interesting information upon it. FONBLANQUE and PARIS, and most of the works on Medical Jurisprudence, refer to it. The information scattered through the general Chancery Reports upon the point referred to would be valuable, but is scarcely accessible to the medical inquirer.

The Editor regrets that he cannot comply with the request of Mr. F. N.

The case received from Gloucester is too extraordinary to be published, without being authenticated by the name of the author of the communication.

Communications have been received from Dr. C. J. ROBERTS, Mr. J. FOOTE, jun., and Mr. J. RAINES.

ERRATUM in the last Number, p. 305. Mr. Russell requests us to correct the following passage: For "Five or eight grains of the Pil. Hydrarg. have been given twice or three times a day," read "twice a day."

*Boylean Lib*

THE LONDON  
Medical and Physical Journal.

NO 376, VOL. LXIII.]

JUNE 1830.

[NO 48, New Series.]

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work to which the Faculty, in Europe and America, were under deeper obligations than to the *Medical and Physical Journal of London*, now forming a long but an invaluable series.—*Rush*.

ORIGINAL PAPERS, AND CASES,  
OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER  
AUTHENTIC SOURCES.

RUPTURE OF THE STOMACH.

*A Case of Rupture of the Stomach, accompanied by violent Spasm, and arising without any evident Cause.* By C. J. ROBERTS, M.D., Physician to the General Dispensary, Aldersgate street.

JOHN DUNN, æt. four, was brought to my house, complaining of pain in the abdomen, which was swollen and tense, with great listlessness and languor: his eyes were dull and heavy, countenance pallid, with a foul tongue and considerable emaciation. He had a short irritable cough, pain in the right side, and some dyspnoea. His mother informed me that, some time previous, he had discharged a lumbricus teres, of considerable size, from the stomach by vomiting. These complaints continuing to increase, I was requested to visit him at home: I attended him for rather more than a fortnight, during which time I freely purged him, and gave him some medicine to alleviate the cough, which was without expectoration and very troublesome, and applied a blister to the right side, which rose well and relieved the pain. The evacuations from the bowels were dark-coloured and fœtid, altogether demonstrating a very depraved state of the stomach and bowels. He, however, slowly recovered, and I left him, although weak, yet without any apparent disease.

About a week from my having taken leave of him, I was hastily summoned to see him, as he was stated to be in

a fit, and without the least expectation of recovery, unless immediate relief could be procured by medical aid. Being from home, I did not see him so promptly as I could have wished; but, instantly on my return, I visited him, and found him lying on his left side: the whole of the muscles of the right side of the body, from the face to the toes, were in a state of violent spasmodic action; the teeth were firmly clenched, excepting at intervals when they ground against each other, and all attempts to separate them were vain. I ordered him immediately into a warm bath, and prescribed some antispasmodic medicine, but he was unable to swallow. The bath afforded some trifling, though temporary relief; and he died in about five hours and a half from the first appearance of the spasms.

His mother could not give the slightest reason for the occurrence of the fit, as he had appeared more than commonly cheerful, and had eaten more heartily than usual, although by no means voraciously, about an hour and a half previous to his being attacked.

Permission was obtained the next day to open the body, which was done with considerable care and attention by my friends, Messrs. EDEN and JAMES.

There were extensive and old adhesions of the right lung to the pleura costalis, but the left lung did not afford the slightest traces of inflammation. The heart was rather larger and more flabby than usual, but exhibited no other trace of disease. There was some slight accumulation of water in the pericardium.

The general appearance of the intestines was healthy. On lifting the omentum, and passing the hand behind the stomach, a quantity of chyme, and other contents of the stomach, was found lying in the abdominal cavity: this viscus was then very carefully removed and examined, when a tear or rent of considerable size was discovered at the cardiac extremity, which included nearly the whole of that end of the stomach. It was most carefully slit up, and every part scrutinised to endeavour to discover the presence of either inflammatory action, or any ulceration or attenuation of the coats of that organ; but none such were discoverable, and we were therefore unable to assign any reason for the rupture. The mesenteric glands were rather enlarged and vascular, more especially one situated near the head of the colon, which was nearly as large as a sparrow's egg.

It is much to be regretted that we were not allowed to open the head.

After this rupture of the stomach was discovered, I questioned the mother very particularly, whether he had fallen from the bed, or had received a blow on the stomach soon after eating, or had been leaning over the side of the high crib in which he was lying, so as to have pressed upon the loaded viscus; but she denied any such circumstance having occurred, and left us as much in the dark as before as to the probable cause of the accident.

31, Bridge street ; May 1830.

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LUXATION OF THE CERVICAL VERTEBRÆ.

*Case of Luxation of the Cervical Vertebrae.*

By Dr. EHRLICH.\*

MANY favorable circumstances most concur, and surgical aid must be very speedily applied, to save the life of a patient who has met with so serious an injury as luxation of the cervical vertebrae. The following case cannot, therefore, be devoid of interest.

A young man, seventeen years old, undertook to carry upon his back a sack of flour, weighing about 160 pounds, to the top of a granary four stories high. To prove his strength and agility, he endeavoured to mount the steps more quickly than his companions, who were laden with a similar burden, and he began to run before them, holding the sack upon his left shoulder. The weather being rainy, the steps were wet and slippery. In his heedless ascent, he struck his load against that of one of his companions, and fell backwards, and still endeavouring to hold the sack, he rolled to the ground. In five minutes after the accident, Dr. Ehrlich arrived. The patient was senseless, in a half-upright position, his knees resting upon the sack. His chest was leaning forwards, but his head, which the weight of the sack had driven backwards with great violence, in rolling over him as he fell down the steps, was resting on the right scapula. On the anterior and left side of the neck, there was a swelling, caused by the second cervical vertebra. The head being completely unfixed, fell from one side to the other by its own weight. The face was of a dark blue colour, resembling that of a person who had been hanged. The eyes projected from the orbits, although the eyelids were closed; the tongue hung out of the mouth, from which flowed an abundant quantity of bloody froth. The lower jaw had dropt, and the veins of the neck were gorged with blood, and appeared like cords. The limbs

\* Journal Complement. des Sc. Med.

were motionless, and seemed paralysed. Respiration was very slowly and laboriously performed, with a stertorous noise. The pulse was intermitting, and hardly to be felt. The feces and urine had been discharged involuntarily.

From all these circumstances it was evident that there was pressure upon the spinal marrow, which was easily accounted for from the evident luxation. It was clear that the atlas was thrown on one side of its articulation with the second cervical vertebra, and that the latter bone formed the projection which was visible on the anterior part of the left side of the neck. The transverse ligament of the atlas, and the lateral ligament of the processus dentatus, had not been able to resist the force which had acted upon them; and the capsular ligament of the articular processes, which is loose enough to permit the semi-rotation of the head, had been necessarily lacerated in consequence of the sudden and severe extension it had suffered.

The patient was immediately laid on his back, while one assistant was directed to support the head, and another to grasp the shoulders to make a counter-extension. Dr. E. applied the palm of both hands to the occiput and to the atlas, which was thrown backwards, pressing both his thumbs at the same time on the projected second cervical vertebra. In this manner he endeavoured, while extension was made, to press the atlas forwards, and the second cervical vertebra backwards. After some ineffectual attempts, he succeeded in replacing the vertebræ in their articular surfaces, and at the moment the reduction was effected, a noise was heard by all the assistants. Immediately afterwards the projection in the neck disappeared, and the head was fixed firmly in the body. The tongue was drawn within the mouth, the jaws were closed, and a slight motion was observed in the arms. The patient, however, appeared to be in a profound sleep. The pupils of both eyes were also much dilated. Respiration was now performed much more freely, and without stertor; and during expiration there was no discharge from the mouth: there was, however, cough, with bloody expectoration; the pulse was very quick and irregular. A little wine was very cautiously given, to reestablish the regular and uniform circulation of the blood, but, as the organs of deglutition were still incapable of performing their office, very little was swallowed.

Every precaution was used to keep the head in its natural situation. Compresses were placed round the neck, and a bandage applied to retain it in an upright position. The

patient was then very carefully placed in bed, nearly in a sitting posture, his head being supported and rendered motionless by properly arranged cushions. As he was still incapable of swallowing, and remained in a lethargic state, hartshorn was applied to the nose, and ten drops of ether were put into the mouth every half hour. The bandage around the head and neck were constantly moistened with a vinous infusion of aromatic herbs. By these means the patient was somewhat reanimated. He occasionally opened his eyes, expectorated more forcibly when the cough teased him, and could swallow a little better. He soon became restless, and endeavoured to turn himself, but was prevented from so doing by the strict orders of Dr. E. When he could swallow with facility, he was directed to drink freely of a solution of cream of tartar and sugar in water, which acted as a mild aperient. The neck was rubbed with a camphor liniment.

During the night the patient had some tranquil sleep, and coughed but little.

On the following morning he understood what was said to him, and answered any questions, but was perfectly unconscious of what had happened to him; he complained only of pain in the back of the neck, and an uneasiness in the left side of the chest. To diminish the pains in the neck, the vapours from aromatic herbs, boiled in water and saffron, were introduced into the mouth; and, as the patient complained of much distress from the bandage, it was removed, and a plaster then applied round the neck, the head being fixed so firmly that it could not be moved. As the pain in the neck still increased, and was not relieved by a mild opiate, twelve leeches were applied, which diminished it, and appeased the difficulty in breathing.

It was probable that some small vessel had been ruptured in the lungs, as the bloody expectoration still continued; but Dr. E. was unwilling to take blood by venesection, as he feared that exhaustion might rapidly follow; besides which, he hoped that repose and fresh air would suffice to arrest the slight hemorrhage. There was still a considerable swelling in the neck, extending down to the chest, which arose from extravasated blood, but it dispersed in eight days from the use of a camphor liniment. The spitting of blood also ceased during this time. The patient could now sit upright in bed; he took mild nourishment with a good appetite, and swallowed without difficulty. The cure proceeded rapidly, no other symptom remaining after the frightful accident which had happened, excepting



pain in the neck when the head was suddenly moved in a lateral direction.

Morgagni, Duverney,\* Mauchant,† Tilesius,‡ and others, are of opinion, from the strength of the ligaments which bind the head to the cervical vertebræ, and those which unite the latter bones with each other, that luxation cannot take place, or at least that it never occurs from hanging. Winslow, J. L. Petit, Ludwig, and Blumenbach, on the contrary, admit, with some restrictions, the possibility of luxation of the cervical vertebræ from various accidents, and especially in persons who have been hanged. It is at all times a very hazardous and imprudent action to raise children by the head. Although the two first cervical vertebræ are very firmly united to the head by ligaments, and the atlas has two ligaments proper to itself, and the head is attached to the vertebral column by the ligamentum nuchæ and numerous muscles, still the ligaments which confine the processus dentatus may be ruptured. In children this process is cartilaginous, and the whole weight of their bodies cannot be safely trusted to so feeble a support.

#### BRONCHOCELE.

*Case of Bronchocele.* By HENRY J. RAINES, Esq.  
Member of the Royal College of Surgeons.

THE pathology of bronchocele is so little understood, and the physiological functions of the thyroid gland are so obscure, that I am induced to transmit the following case for insertion in your Journal; trusting that, ere long, some of my professional brethren, who have ampler opportunities than myself of investigating this disease, will be enabled to throw some light on these important and interesting points.

December 10th, 1829, Mrs. D., æt. thirty-seven, the mother of five children, applied to me on account of an enormous swelling, occupying the whole of the anterior and lateral parts of the neck; the superior portion ascending as high as, and nearly on a level with, the chin, and the inferior resting on the upper part of the sternum.

The patient states that she has been subject to glandular

\* DUVERNEY endeavours to prove the impossibility of luxation of the head from the atlas, as well as between the first and second cervical vertebræ.

† MAUCHANT asserts that, in dissecting the bodies of criminals who had been hanged, he never found luxation of the vertebræ. HOFFMAN declares the same.

‡ TILESIIUS believes that the death of a person raised up by the head does not generally depend upon luxation of the cervical vertebræ, but upon a displacement of the sphenoid bone.

enlargements in the early part of her life, and particularly mentions one under the right knee, which having resisted various local and other remedies, a seton was passed through it by an active and intelligent surgeon, who then attended her; soon after which it entirely disappeared, and it was about this time she first observed the swelling in her neck.

It is now nearly ten years since this occurred, and the swelling has gradually and steadily increased in size, until it has attained its present great magnitude. The respiration is considerably affected, and at times impeded, and is accompanied by a peculiar wheezing; she talks very hoarsely, and is subject to flushing and tingling in the face. I cannot learn from her that the size of the tumor has varied at all during the periods of gestation, labour, suckling, or menstruation; or that it has been affected by the seasons, state of the bowels, &c. Pulse seventy; appetite good.

I prescribed for her ten drops of Tinct. Iodine, three times daily, a calomel purge twice a week, and an ointment containing one drachm of the Hydriodate of Potash, with an ounce of Axunge, to stimulate the surface of the tumor.

At the expiration of a fortnight, I found no perceptible alteration externally; the breathing, however, was much relieved, which led me to conclude that some pressure was taken off the trachea. The ointment could not be applied as I wished, as it was productive of pain and inflammation; I therefore substituted the Iodine ointment, and directed friction to be freely used with the hand. The dose of the Iodine was increased to fifteen, and subsequently to twenty drops three times a day, without the least interruption to or disorder of the bodily functions; and in the course of six weeks I had the satisfaction to see the tumor rapidly disappearing, and when, after having continued this treatment for three months, the patient left my neighbourhood, it was nearly entirely absorbed.

The length of time the tumor had existed, and the age of the patient, render this case worthy of notice. I do not remember to have met with an instance, although I have consulted the most eminent authorities, in which a cure was effected where the patient was above twenty-five years of age.

*Aldbrough, near Hull; April 20, 1830.*

## ANEURISM BY ANASTOMOSIS.

*Case of Aneurism by Anastomosis, in which both the primitive Carotid Arteries were tied.* By R. D. MUSSEY, M.D.  
Professor of Anatomy and Surgery in Dartmouth College, Hanover, New Hampshire.\*

J. PATTEE, aged twenty years, consulted me in September, 1827, respecting a pulsating purple tumor, situated upon the vertex of his head, with a base of about five inches in diameter, and rising an inch and a half or two inches above the cranium. This tumor had existed from infancy, but had greatly increased within the last two years. Upon the apex of the tumor was a sluggish ulcer, of an inch in diameter, which commenced two years before, had been slowly enlarging, and which had bled occasionally during the preceding spring and summer, and once to the amount of two quarts, as estimated by his physician.

The left temporal artery and vein, where they pass in front of the ear, presented through the integuments the appearance of a vessel five eighths of an inch in diameter. This was so prominent in its winding course along the temple, and even to the base of the tumor, that its pulsations could be distinctly seen at the distance of *fifteen* feet. A vein which passed from the tumor down to the forehead, was full and prominent, and half an inch in diameter; and when the head was shaved, more than *twenty* arteries running to the tumor were seen actively pulsating, none of which, as they appeared through the integuments, were less than a middling-sized goose-quill.

Curious to know what would be the effect of securing the large arteries, from which branches were distributed to the tumor, I tied, on the 20th of September, the left primitive carotid. The tumor, after the operation, was a little less tense, and less livid; still the active pulsation of the numerous arteries upon the right side of the base of the tumor rendered it evident that there was an adequate supply of blood. On the twelfth day from the operation, I tied the right primitive carotid artery. The face was a good deal paler immediately after this operation, but, what was scarcely to have been expected, the functions of the brain were not apparently disturbed. There was neither nausea nor faintness; the patient rose from the table, stood up, and, while standing put on his vest and coat, and tied on his cravat; he then walked down two flights of stairs, got into a

\* American Journal of Med. Sciences.

carriage, and rode to a distant part of the village, without feeling the least symptoms of faintness, or manifesting signs of inconvenience.

The tumor, which, after this operation, was daily dressed with a compress and bandage, so as to make slight compression upon it, the compress being kept constantly moist with alum water, progressively subsided, and in about four weeks was reduced apparently to about one third of its original volume. At this period the tumor became stationary, and in five or six days began very slightly to enlarge; its colour was a little deepened, and a feeble thrill, corresponding with the pulse in other parts, could occasionally be perceived in the left temporal artery. These appearances indicating that nothing further was to be expected from tying the carotid, or from astringent applications or compression, I proceeded, on the 22d of November, about six weeks from the second operation, to remove the tumor.

This was accomplished by first encircling the tumor by an incision made quite through the soft parts, and rapidly dissecting away the whole mass from the pericranium. More than an hour was occupied in carrying the knife around the base of the tumor; the whole operation being conducted with immediate reference to the saving of blood. Not more than an inch and a half of the scalp was divided at a time, and immediately upon the division, firm compression was made upon each lip of the incision, while the vessels were secured by ligatures, more than forty of which were applied in going round the tumor. Notwithstanding, however, these precautions, it was estimated by all present that blood to the amount nearly of two quarts was lost during the operation. The patient was faint, and continued very feeble for several hours. The naked pericranium, in extent equal to about twenty-five square inches, granulated kindly, and in eight weeks the wound was nearly healed. It was some months, however, before the cuticle, through its whole extent, became firm, so as to sustain itself under considerable variations in the state of the circulation. The patient returned to active labour upon a farm the following March or April, has continued it ever since, and has been one of the most athletic and industrious labourers I have seen.

This case is interesting in a physiological view, for at no period subsequently to the operation of tying the second carotid, with the exception of the faintness and debility which occurred from the actual loss of blood on the removal of the tumor, has there been a single symptom of deficiency of blood in the brain. Indeed, at one period, viz. in the

spring of 1829, sixteen or seventeen months after the operation, the opposite state seems to have existed; as the patient had flushed face, accompanied with the headach daily for two or three weeks, and was not relieved essentially by cathartics. A single large bleeding entirely removed the symptoms.

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PARURIA INOPS.

*Some Account of a Case of Paruria Inops (GOOD), or Paralysis of the Kidneys.* By GEORGE HAYWARD, M.D. of Boston.\*

THIS disease, in which, according to Dr. Good, the "urine is unsecreted by the kidneys," and there is "no desire to make water, nor sense of fulness in any part of the urinary track," is of very rare occurrence. No writer but Sir Henry Hallford, that I am aware of, has published any account of it: this circumstance, together with the fact that its termination is usually, if not always, in death, induces me to submit the following details of a case that recently occurred in my own practice.

On Thursday, July 16th, 1829, at one o'clock P.M. I visited a lady, in the fiftieth year of her age, the mother of several children, who complained of considerable nausea, with diarrhœa and slight pain in the stomach and bowels. She had been as well as usual till Tuesday evening, but since that time had been so much indisposed as to abstain from all food. Her indisposition she attributed to taking cold, from exposure on Monday night. She had formerly been a good deal of an invalid, having suffered severely from repeated miscarriages, but had for the last eight or ten years enjoyed a very tolerable share of health.

I found her tongue covered with an unusually thick coat, her pulse between seventy and seventy-five in a minute, moderately strong, and her skin cooler than in health. I directed a gentle emetic of the wine and powder of ipecacuanha, to be followed by castor oil, and the dejections to be restrained by opium, if they were excessive.

On Friday morning I learnt that the emetic had operated thoroughly but mildly, and that she brought from her stomach food, in an undigested state, that was taken on Tuesday. Her bowels had been so frequently moved as to render it necessary to give her three grains of opium at intervals. She was somewhat stupid, which at the time was attributed to the opium; the coat on the tongue remained

\* Ibid.

about the same. She still complained of nausea, though she was free from pain; the pulse was slower than on the preceding day, and the temperature of the skin was diminished. At this visit she told me that she had passed no water since early on Wednesday morning, but that she had no desire to do so, and no pain or inconvenience from it. On passing my hand over the bladder, I satisfied myself that it was not distended: I directed her to take one drachm. of a mixture of three parts of the liquid acetate of ammonia, and one part of the spirit of nitrous æther, every two hours, and to let me know in the afternoon if she had not evacuated the bladder in the interval. I was sent for in the afternoon, as no water had been passed: there was still no suffering, and the bladder was not distended. I then introduced the catheter, and drew off about half an ounce of urine of a very healthy character. The patient was more drowsy at this visit than I had seen her at any previous one, and being now convinced that the whole trouble arose from a want of secretion of urine, I stated to her family that I considered her situation an alarming one, and that the disease would probably have a fatal termination. This surprised them, as her strength was good, she was without pain, and conversed freely, when roused from the stupor to which she was inclined.

I now directed a large blister to be applied over the kidneys, fomentations of hot herbs in spirit above the pubis, sinapisms to the feet, and stimulating frictions to the whole surface of the body, with a continuance of the diuretic mixture.

On Saturday morning all her symptoms were aggravated the pulse slower, the skin colder, and the coma increased. The tongue remained coated, there was no appetite for food, and no water had been passed. A powder, composed of one grain of the submuriate of mercury, five grains of the nitrate of potash, and a scruple of cream of tartar, was ordered to be given every two hours, and the medicine that had been before directed was to be taken in the intermediate hours, and the other remedies were continued. No improvement took place during the day: on the contrary, the coma increased, the pulse became slower and more feeble, and the temperature of the skin was diminished.

Finding all her symptoms worse on Sunday morning, I directed ten drops of the tincture of cantharides and capsicum to be given every two hours, instead of the mixture of the spirits of nitre and Mindererus, and the other remedies to be continued. At this visit I passed the catheter, and drew off about an ounce of healthy urine. At three o'clock

P.M. Dr. Warren saw her with me; she was now so comatose that it was impossible to rouse her, and her pulse had sunk very considerably since morning.

Dr. W. advised to give one drachm of the tincture of cantharides and capsicum every two hours, to rub along the whole course of the spine with the same, and to continue the use of the other means. The medicine was given and the other directions followed till eight o'clock in the evening, when she became unable to swallow, her pulse ceased at the wrist, the surface of the body became cold, and the breathing stertorous, and at long intervals; and in this state she continued till Monday evening, at seven o'clock, when she died.

*Sectio cadaveris, twenty-three hours after death.* The examination was made in presence of my friend, Dr. Homens, of this city.

The general appearance of the body was natural. On dividing the scalp from ear to ear, and dissecting it from the cranium, no fulness was discovered in the vessels of the integuments, and scarcely any blood was effused. The brain and its membranes were found to be in a perfectly healthy state, there was neither effusion nor congestion, but all the appearances warranted the conclusion that the morbid symptoms were owing to the quality of the blood, rather than to its quantity.

There was no mark of disease in the stomach, intestines, liver, spleen, or uterus. The kidney of the right side was about half the usual size, and a third part of it at least was of a deep purple colour, exhibiting traces of considerable inflammation, apparently recent. When cut into, it emitted a strong urinous odour.

The left kidney was not larger than a small English walnut, but of a healthy appearance, and free from any urinous odour. Both the ureters were somewhat inflamed. The bladder did not contain a drop of urine; the mucous coat was nearly black, appearing to have been the seat of violent inflammation. Whether this was the case, or whether the inflammatory appearance about the ureters and bladder was to be attributed to the absence of urine, the usual stimulus of the parts, is a point which I feel unable to decide.

As this disease so rarely occurs, and as all the cases that have come to my knowledge have terminated fatally, I shall be excused perhaps for adding a few remarks. The only printed account of this singular affection which I can find, is the one by Sir Henry Hallford, referred to in the beginning of this paper. It was published in 1820, in the 6th volume of the Transactions of the College of Physicians in Lon-

don. It appears that he had never seen but five cases. They differed in some respects from the one above detailed. "All the patients were fat, corpulent men, between fifty and sixty years of age." "In three of them there was observed a remarkably strong urinous smell in the perspiration twenty-four hours before death." Nothing of this kind was discoverable in my patient.

In Sir H. H.'s patients, no urine whatever was secreted; and he remarks, that "if any water, however small the quantity, had been made in these cases, I should have thought it possible that the patients might have recovered; for it has often surprised me to observe how small has been the measure of that excrementitious fluid which the frame has sometimes thrown off, and yet preserved itself harmless; but the cessation of the excretion altogether is universally a fatal symptom in my experience, being followed by oppression on the brain."

From my patient, it will be recollected, that a small quantity of water was drawn off on Friday afternoon, and again on Sunday morning, showing that some secretion had taken place, which proves that the conjecture in the above quotation, as to the favorable termination of this disease under such circumstances, is unfortunately not to be much relied on.

The disease he denominates paralysis of the kidneys, and till something more is known of it, this name will answer perhaps as well as any other, though if it were fair to draw any conclusion from a single instance, it might be inferred, from the appearances in my case, that the paralysis was consequent on an organic affection. It does not appear that he made any examinations after death, nor has he detailed his method of treatment. Whether this affection is under the control of any remedies we possess, remains to be proved, but hitherto all attempts to check it have been unavailing.

The slow and feeble pulse of my patient, the temperature of her skin, which was below the ordinary standard, and the entire absence of pain, seemed to forbid all depletion, but indicated the administration of stimulants, such especially as would act on the urinary organs. But I must confess that nothing that was administered appeared to have the slightest effect in relieving the patient; and if another case should fall under my care, though I know not what different treatment I could pursue, yet I should feel but little encouragement in adopting my former plan.

Death in these cases is no doubt owing to the impure state of the blood, arising from the failure of the kidneys to per-



form their usual secretion. The circulating fluid, when it is first received from the lacteals, is in a state wholly unfit to support the vital functions. It is an important part of the office of the lungs, skin, and kidneys, to purify it, and if the customary action of these organs be partially interrupted, alarming consequences ensue, and a complete suspension of their functions produces death. This is well known with regard to the lungs. The immersion of the body into carbonic acid gas is followed by an immediate suspension of vitality, and unless the lungs are soon supplied with respirable air, death is the consequence. The cause of this is, that the pulmonary organs, when deprived of vital air, are unable to effect that peculiar change in the blood which should take place in them; the blood is then sent to the left side of the heart in a state unfit for the purposes of life.

A similar effect, though less sudden, would be produced if there should be a total suspension of the action of the skin, and a failure on the part of the kidneys to perform the office assigned to them, is followed by like consequences. There is a great similarity in the morbid effects arising from these different causes, because the brain is in each case the organ primarily affected. To enable it to perform its functions well, it must be regularly supplied with what is called arterial blood, that is, blood that has been freed of its excrementitious part. But when impure blood is sent to it, it instantly ceases to act if the impurity be great, and immediate death is the consequence. If the noxious principles have been in part removed by the lungs, skin, and kidneys, the effects are not so sudden or violent; coma, however, usually comes on, which gradually increases, if the cause continue, till it terminates in death. When the kidneys, therefore, fail to secrete urine, and thus rid the blood of a part of the excrementitious matter which it contains, the functions of the brain are soon disturbed, and death ensues, unless, as sometimes happens, another organ performs a vicarious office for them.

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#### LITHOTRITY.

*Lithotrity. The Baron HEURTELOUP's Instruments.*

At a meeting of the members of the Royal Institution, held on the 14th of May, the subject of lithotrity was introduced by Mr. GILBERT BURNETT, and the various instruments used in that operation, with the methods of employing them demonstrated and described; more especially referring to the improved apparatus of the Baron

**HEURTELOUP.** As the mechanism of these latter had not previously been made public, although their action had frequently been shown, an abstract of the detail given by Mr. Burnett (which was illustrated by enlarged diagrams of the parts of the several instruments, both separate and in conjunction,) will doubtless be interesting to the profession.

Mr. Burnett avoided (and we think wisely) entering at all into the controversy which has been, and still is, carrying on with respect to the originality of the process, and the inventors of its several parts; and confined his observations chiefly to what is of more essential importance, the operation itself, and the instruments with which it can be most effectually and easily performed: for, as he observed, it is a far more grateful task to show how much surgery stands indebted to Gruithuisen, Civiale, Le Roy, and Heurteloup, as collegued in the advancement of lithotrity and the improvement of its apparatus, than as rivals contending for a prize which would be incomplete if deprived of the discoveries of either.

It is a matter of notoriety, that in females the urethra may be so far dilated that stones of considerable size can be extracted from the bladder; and in the male, small calculi are sometimes voided in the same manner, or even occasionally have been extracted by means of lengthened forceps. Now, lithotrity is an operation by which calculi of almost any size, at least to that of twenty-four lines in diameter, may be reduced to powder, or to fragments so small, that they can be washed out of the bladder by injections, or carried away in the ordinary flow of urine.

The elements of this operation hence are,

1. The reduction of the curves of the urethra to a right line, so that straight instruments may be passed there-through, and its capacity dilated.
2. The introduction of an apparatus, the different parts of which are fitted to sound, to seize, and also to destroy, the stone.
3. The injection of fluid into the bladder, by which, during the operation, its parietes are kept from coming in contact with the instruments, and by which the detritus may be afterwards washed out.

These elements of lithotrity may claim in part a very early date; but, although long known, it was not till lately that they became of much practical importance; and to the distinguished foreigners already mentioned, is the credit due of combining them in one efficient system, as well as of

constructing a series of very ingenious instruments, by which the operation not only can be, but has been frequently performed with success.

The simplest form of apparatus, and that which is found most useful for the destruction of small calculi, consists of a straight canula, containing within it a three-branched forceps, the elasticity of which causes its tentacles to expand when pushed beyond the end of the canula by which they are concealed; or, rather, when the canula is withdrawn, so as to permit their developement. The ends of the forceps are curved, and all of different lengths, so that they cannot include any fold of the bladder, even were it to contract or fall upon them; they are all united at their manual extreme, forming by their conjunction a tube through which a drill (the length of which is regulated by the length of the forceps, so that it cannot injure the bladder, and the crown of which may be either eccentric or not, according to the size of the calculus,) acts, and grinds away the stone: if the stone be small, it may at once be crushed by the pressure of the drill, when held firmly by the forceps; or, when bored through once, it need not be let entirely to slip from the forceps in order to make another perforation; for, if the manual end of the instrument be tapped while the branches are slightly relaxed, a fresh surface will be presented, which may be ascertained by the resistance afforded to the drill. At the side of the canula is a foramen, with a screw or plug, by loosening which the fluid may be allowed to escape.

For the destruction of stones exceeding eight lines in diameter, this instrument is tedious; and, when repeated sittings are required, it might so happen that one branch of the forceps might enter a perforation in the stone, and occasion much difficulty in the operation, if not danger to the patient. For the destruction of stones from eight to fourteen lines in diameter, the crown of the drill has been enlarged, so that they may be reduced at once to fragments; and this has been done in various modes, the most efficient of which would seem to be the projection of a small branch, somewhat resembling a comma, from the side of the crown of the drill, after a perforation has been begun, so that it is rendered still more eccentric in its action than the mere eccentric drill: this projecting branch, or comma, can be protruded or withdrawn at pleasure, by a rod which runs through the centre of the drill. The forceps and drill, thus modified, have been named "*Instrument à trois branches et à virgule.*" The invention of the previous

instruments we believe to rest with Gruithuisen, Civiale, and 'Le Roy; but they have each been improved by Baron Heurteloup in design and construction. The following, which are well fitted to seize and destroy stones exceeding fourteen lines in diameter, and those which are flat, we are informed belong solely to the latter.

It is a fact well known that, when the stone is large, the bladder in general is small; not only relatively, but absolutely smaller than when the stone is of moderate dimensions; and furthermore, that the bladder contracts frequently upon the stone, and assumes a preternatural muscularity, the inner surface having not merely a rugose, but a columnar character. This, of course, will prevent that viscus from being freely distended by injection, will keep the stone nearer the neck of the bladder, and might interfere with the fully extended tentacula of the three-branched forceps. The larger the calculus is, the more numerous, of course, must be the perforations made in it before its substance will break down, and, even with the eccentric or virgule drills, the process would still be tedious, although much more speedy than if simple perforations alone were made. The irregularity of stones likewise gives rise to difficulty in their apprehension and firm retention, as it seldom happens that all the claws, moving simultaneously, close upon the calculus, especially if it be a large one; so that, when pressed upon by the drill, it is apt to slip or to elude the grasp. Furthermore, that form of the three-branched forceps previously described, the whole of the tentacula of which are in union, and of necessity move together, can never at its utmost stretch, project a span of more than one third of its circumference; and even this diminishes rapidly towards the canula, there being no means of keeping the springs at any greater width from each other.

To overcome these difficulties, all the instruments have been modified and others added by Baron Heurteloup, who designates this improved apparatus, which is fitted to destroy stones twenty-four lines in diameter, "*Evideur à forceps*," (*excavator with forceps*,) and it consists of several parts, which may briefly be thus described: The straight canula, instead of being a simple cylinder, as in the other apparatus, contains within it another tube, nearly equal to itself in length, which is four-sided, so that the chief channel is subdivided into five compartments, a square central one and four circumferential passages, through each of which latter passes one branch of the forceps, which here consists of four instead of three tentacula. Three of the

branches are terminated at their vesical extremes by simple curves, the fourth and longest by a grooved knob, which closes in the whole, and facilitates the introduction. The four branches of the forceps being separate from each other, and sliding in separate grooves, may hence, by knobs fixed to their manual ends, be each moved independently of the other, or, by a case which encloses the knobs of all, be made to act simultaneously; thus combining, with all the advantages of the common forceps, the very important privilege of separate and more or less conjoint action. The four-branched instrument, by the withdrawal of one of its tentacles, may also be converted into a superior three-branched forceps, as the span of its branches will be the diagonal of its square, instead of the mere base of an equilateral triangle, as in the former case; so that stones of much greater magnitude can be seized, and with much less extension of the instrument: furthermore, the knobbed tentacula, when withdrawn, will still more widen the grasp of the other three, and keep them fully and firmly apart. The separate motions of the tentacles will also allow each to be separately pulled on, so that every one can be firmly acting on the stone; a very important circumstance. The knobbed tentacle may, subsequently to the prehension of the stone, be detruded, and it will also close upon it; and, when all four branches act, the retention is the most firm that can be conceived. Through the central cavity, the subsidiary instruments are introduced: these consist of a simple steel rod, called the "Indicator," and a very delicate three-branched "assistant forceps," (*pince servante*), designed to bring the calculus within the grasp of the larger and stronger instrument, should it not in the first instance be easily apprehended. The instruments destined to destroy the stone consist of a pointed steel rod, "the perforator," which, rotated by a common drill bow, makes a hole in the stone; and the excavator (*evideur*), which is a somewhat similar rod, the end of which is a very powerful rasp or file, which can be inclined, by means of a screw, to any angle the size of the calculus may require, and which, when rotated, by means of the bow as before, excavates the stone, leaving nothing but a thin shell formed of its outer layers, which the withdrawal of the branches of the forceps will usually be sufficient to crush: should it, however, resist their force, the indicator may be used as a "percussor," and one or two strokes of the simple steel rod upon the shell will inevitably reduce it to fragments.

Such is the economy of the excavating apparatus, which,

for the destruction of large round stones, is incomparably the best instrument yet invented; but the seizure and destruction of flat stones, or the flattened shell-like fragments of larger calculi, have presented many difficulties to the operating lithotrist. The "shell-breaker," or *brise-coque*, would seem to obviate these. It has been said to be merely an improvement on the *brise-pierre* of Amusat: in truth, the chief difference between them is that, although both are ingenious instruments, the one is highly useful, the other inapplicable in practice.

The shell-breaker both seizes and crushes the calculi or fragments, without the assistance of drill or perforator. Hence it is necessarily made very powerful in its branches, and, to allow such strength in its construction, without increasing too much the size of the tube, it consists but of two branches, which entirely fill up the canula, and are terminated by strong roughened jaws, which open by a spring placed between them to receive the calculus when detruded from the canula, and, closing in their retreat, crush the hardest stone or fragment between their hawk-bill ends. Motion is communicated to these branches by a double rack and two wheels contained within the handle, the inward and outward progress being commanded by a spring catch which regulates the rack.

It has been usual to operate on an ordinary bed or couch, and to fix the lithotritic instruments in a spring vice held by an assistant, while the surgeon completed the perforation of the calculus by the drill and bow; but when a much more powerful mean, viz. the excavator, is employed, it becomes necessary that the instruments should be held more steadily, and for this purpose Baron Heurteloup has constructed a very ingenious bed, the "lit rectangle," to the front of which there is a movable vice attached, and which can also be lowered as a whole by movable hind legs, so as to form an inclined plane, and elevate the pelvis, &c. without disturbing the patient. This, however, as well as the catheter with foramina several inches down the side, and the syringe with bows, although useful instruments, cannot be deemed essential to the operation; and they will, of course, be adopted or rejected according to circumstances, of which the attending surgeon can alone be the proper judge.

When vaccination was first introduced, the officious zeal of a few intemperate supporters of the cause endangered the success of it by foolishly asserting that it was infallible; that smallpox never had, and never could, occur when the

constitution had been protected by its influence. The public naturally began to doubt the merits of vaccination, when they found that they were deceived by studied misrepresentation; and they who were determined to oppose the introduction of the new practice, were assisted in their endeavours to prejudice the public mind against it, by incessant appeals to the want of candour of some of its partisans. In the same manner, the great surgical improvement of the present day, lithotrity, has been over-praised by those who, from being imperfectly acquainted with the subject, assert that the operation of lithotomy will henceforth be entirely forgotten.

This is by no means a fair and impartial view of the case, and those who are most deeply interested in the success of lithotrity, as Heurteloup, Civiale, &c. have shown their judgment by abstaining from such exaggerated encomiums. It must be granted that there are cases of calculus in the bladder which do not admit of the employment of the lithotritic apparatus; but the important and gratifying fact that the great majority of patients labouring under this formidable disease may now be rescued by the comparatively mild and perfectly safe operation of lithotrity, is established beyond dispute. Among those who have distinguished themselves in the lithotritic art, both by ingenious improvements in different instruments and great practical dexterity, the Baron Heurteloup claims a high rank. As a proof of his merit, the Academy of Sciences of Paris bestowed upon him their first surgical prize for his improvements of lithotritic instruments.

On Friday, the 22d, the lithotritic instruments invented by Mr. LUKIN, the American, and exhibited in this country and on the continent some years ago, were placed on the library table of the Royal Institution. They are certainly very inferior to those recently constructed; but if, as is stated, his were the first made, much credit is due to him for having so far advanced the design. They consist of a *straight* silver canula, concealing a four-branched forceps, terminated by watchspring loops, for the prehension and retention of the stone; and a small trephine drill, with several forms of chisels for its destruction; also a two-branched forceps, of very ingenious mechanism, but which seemed rather fitted to extract stones from the urethra, or very small fragments from the bladder, than to hold larger calculi whilst being reduced to pieces, or to act with the energy of a *brise-coque* or *brise-pierre*.

## VAPOUR OF CHARCOAL.

*Recovery from apparent Death after Exposure to the Vapour of Charcoal.* By M. RENE BOURGEOIS, D.M.P.  
&c. (Condensed from the *Archives Gen.*)

A SERVANT boy was found by his master in bed, entirely motionless and senseless. It was supposed that the lad had died suddenly, but M. B. was immediately sent for. He detected, on entering the room, a slight odour of charcoal, and thought it probable that the patient was in a state of asphyxia, from exposure to mephitic air. He was confirmed in this opinion by perceiving a night lamp on a table no longer burning, although it was well supplied with oil, and an iron pan in which were vestiges of half-burnt charcoal. Without waiting to make further inquiries, and notwithstanding the weather was intensely cold, M. B. did not hesitate to remove the boy to the middle of an open yard, where he was placed, almost uncovered and as upright as possible, in a chair.

A careful examination was now made, and the patient was found to be in the following state: Limbs flaccid and motionless, and, like the head, following automatically all the movements of the body; heat of a natural degree, and equably distributed over the surface; mouth open; pupils dilated and fixed; the lips and upper eyelids slightly swollen, and of a bluish colour; neither any respiratory movement nor pulsation of the heart or arteries was to be detected; the urine passed away by drops, the feces had been discharged; general insensibility. In a word, the boy was to all appearance dead.

Although, under such circumstances, but little was to be hoped from medical assistance, M. B. determined to make every effort to restore animation. After exposure to the air for more than half an hour, during which time cold vinegar and water was frequently dashed upon the head and face, whilst ether was occasionally applied to the nostrils, the patient was removed into a large room, and placed upon a camp bedstead, in such a situation that he was exposed to a free current of air. The windows were all opened, and only two assistants retained in the apartment, who, with M. B., briskly rubbed dry the surface of the whole body with flannel, after sprinkling it with ether and vinegar. In a careful manner, and at different intervals, air was blown into the respiratory passages, either with the mouth or a pair of bellows. From the fear that the mephitic gas which filled the bronchia might, from its density, impede the entrance of a current of air impelled in either of the above modes, M. B. introduced into the mouth, near the opening



of the glottis, the extremity of an exhausting syringe, by the action of which he endeavoured to effect the purposes of expiration. A large number of brimstone matches were lighted, and then, having formed a fumigation with salt and sulphuric acid, the vapour was directed towards the mouth and nostrils. Several clysters were administered of cold vinegar and water. Although there was a purple turgescence of the countenance, which indicated a congestive state of the subcutaneous vessels, venesection was not had recourse to, as there was as yet no proof of the continuance of the circulation of the blood. To ascertain this point, a ligature was placed upon the arm and gradually tightened, but none of the superficial vessels became enlarged in consequence. Cupping glasses were applied, but no blood could be drawn.

All these various means had been pursued for a long time without any appreciable result, when M. B., on applying his ear to the chest of the patient, fancied he heard at intervals, near the junction of the bronchia with the trachea, a sort of gurgling noise, similar to that which arises from a small volume of air rapidly passing through a collection of mucus, but each time the sound was so weak and momentary that it could not be very clearly heard. Still the hopes of the attendants were excited. After some time the motion of flatus was distinctly heard in the intestines; and, although this motion was possibly passive and insignificant, M. B. was willing to persuade himself that it was a proof of returning irritability in the intestinal canal. The stethoscope was now constantly applied to the chest, and interrogated with great anxiety. At last, about eight o'clock in the morning, three hours from the arrival of M. B., a very slight *râle* in the trachea indicated the first expiration. The sound was so indistinct that its reality was doubtful, until a clear mirror that was applied to the mouth was found sullied with the breath. Almost at the same moment a feeble contractile motion of the nostrils was perceived, accompanied by a slight sound from the exit of air. A frothy matter was now occasionally thrown from the mouth, and an irregular hiccup came on, which was followed by a sort of horripilation and trembling of the surface of the body. A ligature was again applied to the arm, and the veins below it now became swollen and tense. Eight ounces of very thick black blood were drawn with some difficulty. Ligatures were successively applied to the ankles, the hams, the calves of the legs, and upon the thighs and arms, as M. B. imagined that a stimulus might be afforded to a more vigorous circulation of the blood, by

causing distention of the vessels by a ligature, and then suddenly removing it. The frictions were assiduously continued, and strong sinapisms were applied to the inferior extremities. Cupping glasses were also applied to the chest and along the spine. The respiratory movements gradually became more distinct; the mucous *r  le*, which could at first only be detected by the stethoscope, was now heard at some distance. In a short time the breathing was loud and stertorous; the circulation was gradually reestablished, and the pulse became nearly of a natural character.

Although the organic functions appeared to be restored, the patient remained in a state of profound coma, motionless and perfectly insensible. M. B., however, felt confident that he should succeed in restoring the patient, and, after *eleven hours'* anxious attendance, he ventured to leave him for three quarters of an hour. Upon his return he found the boy, much to his surprise, with his eyes open, and in perfect possession of his senses, talking loudly with a number of persons who had been drawn to the spot by the report of his "resurrection."

When he revived, his first belief was that he had overslept himself, and he was anxious to open the shop without loss of time. It was with difficulty that he was induced to believe what had occurred: but he remembered that he went to bed at ten o'clock the night before, and, being cold and with his feet wet, he filled an iron pan with lighted charcoal, in order to dry himself, and that he had left it burning.

To the detail of this interesting case, M. B. adds some good practical remarks. With respect to the treatment of similar instances of asphyxia, he observes, that the first thing to be done is to expose the patient to a cool and dry air. Air is then to be introduced into the lungs by means of a laryngeal tube: M. B. would not rely upon the mouth of an assistant or a pair of bellows to effect this very important object. It would appear, from the recent experiments of M. Leroy d'Etiolles and other physiologists, that the practice of insufflation is not unattended with danger; and M. B. admits the impropriety of it when the lungs possess sufficient irritability to react against the violent admission of air; but he doubts whether the arguments of Leroy d'Etiolles will apply, if insufflation be only practised when the function of respiration is completely abolished, which is indeed the only case which requires such an expedient. He also suggests the probable advantage of first emptying the respiratory passages of the vitiated air which they contain, which he attempted to do in the above case by means of the exhausting syringe. Dry frictions briskly appli-

ed over the whole surface of the body should be promptly employed. M. B. coincides with Segalas in the opinion that, besides the direct stimulus thus afforded to the nervous fibrils of the skin, the friction produces, by promoting absorption, a kind of cutaneous respiration; a commencement of oxygenation of the blood contained in the superficial capillaries. Cupping glasses should also be applied, with and without scarification. M. B. does not conceive that general bleeding is so strongly indicated in such instances as the above, as in those cases of asphyxia which depend upon sudden violence, and in which some organ essential to life is suddenly overloaded by an overwhelming congestion of blood. In the former case there is no true congestion, but rather a general and passive stasis of a column of black blood, for the circulation of which the accustomed actions of the heart are alone required. It is now satisfactorily ascertained that an imperfect and slow circulation of the blood may go on in the large vessels after the heart has ceased to pulsate. The swelling of the veins in the subject of the above case from the application of ligatures around the limbs, is a proof of this fact.

In conclusion, M. René Bourgeois directs attention to the efficacy of appropriate treatment in such cases, when it is employed with due perseverance, even when there is apparently little or no hopes of success. In the above instance, three hours elapsed before any signs of vitality were detected, and the patient did not regain his consciousness for twelve hours. We should not, therefore, abandon such cases until the most unequivocal signs of death are present, and still less ought the burial of the body to be hastened. We should bear in mind the adage so well expressed by the inimitable Molière :

“ Qui tôt ensevelit bien souvent assassine,  
Et tel est cru défunt qui n'en a que la mine.”

The persevering kindness with which M. René Bourgeois continued his efforts to restore animation in the above case is alike creditable to his professional and philanthropic feeling. His success, under circumstances which might have made many practitioners despair, affords additional evidence of the necessity for the most determined continuance of appropriate treatment in cases of suspended animation. However frequently practitioners have been warned against the hasty abandonment of patients in a state of asphyxia, we still fear that lives are not unfrequently sacrificed, which might be saved by the exertion of the same degree of zeal and perseverance which reflect so much honour upon the relator of the above case.

## HOSPITAL REPORTS.

## MIDDLESEX HOSPITAL.

*Cases of Jaundice, with Disease of the Pancreas.*

JOHN PYEMONT, aged fifty, clerk to a surveyor, admitted Nov. 3, 1829, under Dr. WATSON.

Skin and conjunctivæ of a deep yellow colour; bowels seldom moved; no stool for the last three days. Urine dark brown. Complains of debility and languor. States that he was taken ill, nearly six weeks ago, with pain in the head and loins; and was twice bled with great relief; that his bowels, previously regular, became sluggish at the commencement of his illness, and that the dejections from that period have resembled water gruel in colour and consistence; that he has been confined to bed for the last month, has been very feverish, and has wasted considerably; that he is now better in all respects, except the jaundice, which came on a week or ten days since. Objects do not appear yellow to him. Tongue rough, and covered with a dirty fur; says that within the last few days he has recovered the sense of taste, which he had lost during the former part of his illness. Pulse ninety-six, weak.

R. Pilulæ Hydrargyri, Extracti Aloës purificati, aa gr. ijss.; Mucilag. q. s. M. fiat pilula, nocte manequè sumenda. Sumat etiam, ter quotidie, Magn. Sulphatis zi. ex Mist. Camph. f̄ss.

4th.—The abdomen was carefully examined, the patient being in bed. There is a visible fulness of the epigastrium on the right side, just beyond the cartilages of the upper false ribs: here a firm roundish tumor may be felt, about as large as a small apple, apparently circumscribed, and distant a quarter of an inch from the edge of the ribs. Further back, immediately beneath the ribs themselves, the abdomen is soft and supple. Says he suffers no pain in any part, nor does firm pressure on the projecting tumor occasion any uneasiness. Bowels not moved since his admission.

R. Infusi Sennæ comp. f̄zi.; Tr. Sennæ f̄ss.: Potassæ Tart. zij. M. fiat haustus, quam primum sumendus. Perstet in usu pilularum, et adhibeantur Hirudines decem epigastrio.

7th.—Thinks himself better since the application of the leeches. Bowels open; character of the stools unaltered. The urine, when collected in considerable quantity, appears almost black: dilution with water shows that this appearance is produced by concentration of the colouring matter of the bile; when much diluted, the urine becomes of a bright, transparent yellow.

Repetantur Hirudines vi., et sumat pilulam ter quotidie.

From this time to the 23d, on which day he died, he became progressively weaker, without any other remarkable change, except that, during the last few hours of his life, he was much harassed by nausea and retching, which had not occurred previously.

The body was examined on the 24th.

Universal yellowness of the surface, and great emaciation.

In the thorax, the right lung occupied a smaller space than ordinary, the diaphragm being pushed upwards by the liver, the upper surface of which was on a level with the upper edge of the fifth rib. The substance of the lungs was generally healthy; a hard portion at the summit of the right lung proved, when cut through, to be a moderately sized tubercle. No other tubercle was detected. The pleura covering that part of the right lung which lay undermost, and was fullest of blood, was marked by numerous small red spots, like those seen on the serous membranes in some cases of purpura.

The abdomen being opened, the tumor, which had been supposed to appertain to the liver, was found to be quite unconnected with it. It consisted of a mass of cancerous disease, disposed about the pyloric extremity of the stomach, involving in its central part the pancreas, and lying along the dorsal vertebræ. This mass was not homogeneous, nor very hard: it appeared to be composed of many distinct roundish tubera, pressed closely together, and of a dull yellowish colour. Several scattered tubera of the same kind were imbedded in the substance of the pancreas. The mucous membrane of the stomach and duodenum was entire, and apparently healthy; the pyloric orifice seemed slightly narrowed by the diseased mass which lay round it.

On the surface of the liver, and dispersed through its substance, there were numerous small, yellowish-white tubera, most of them about as big as a hazel nut; some having a curdy consistence, others softer and more fluid, resembling collections of very thick pus. They were not contained in cysts, but adhered loosely to the proper tissue of the liver. In the intervals between them, the liver itself was of a deep lead colour, and in other respects apparently healthy. The gallbladder was greatly distended; it contained a fluid which was tolerably limpid, and as black as ink. Dilution with a large quantity of water changed the black to a bright yellow colour. The cancerous mass which lay about the pylorus and duodenum had encircled, and completely closed, the extremity of the ductus communis choledochus.

There was a considerable hydatid in the pelvis of one kidney, and a smaller one in the cortical substance of the other. The colon was extremely narrow; and some of the folds of small intestines were adherent to each other.

The head was not examined.

CASE II. Elizabeth Mounteney, aged fifty-four, admitted September 29th, 1829, under Dr. WATSON.

Intense yellowness of the skin and conjunctivæ; urine very high coloured; dejections reported to be sometimes dark and sometimes clay coloured. The liver can be felt extending beyond the ribs, and partly across the epigastrium; its edge appears to be

in some parts knotty and uneven: no pain, or a very slight sensation only of uneasiness, is produced by firm pressure upon this part. Abdomen elsewhere soft and natural. States that she was told, about a fortnight ago, that she was jaundiced, and was not previously aware of it; that she suffers no pain, and has suffered none; but has considered herself a healthy woman till about six months ago, when she began, without any known cause, to feel ill and uncomfortable. Since that time her appetite has failed, she has gradually wasted, and been languid and low spirited. She can lie without inconvenience in any position. Objects do not seem yellow to her. Bowels confined at present.

Sumat Pil. Hydrarg. cum Aloë gr. v. statim, et Haustum Sennæ comp. post horas quatuor.

30th. —Bowels freely purged; no trace of bile in the dejections. —Perstet in usu Pilulæ omni nocte. Capiat Magnesiæ Sulphatis gr. ex Inf. Rosæ comp. f ʒij. ter in dies.

October 5th. —No change. Bowels not purged; stools reported dark. —Omittantur medicamenta. R. Infusi Sennæ comp., Dec. Aloës comp. āā f ʒss. Fiat Haustus, ter quotidie sumendus.

On the 7th, she complained that the medicine occasioned griping pains in the bowels. It was omitted, and a decoction of Taraxacum substituted in its stead. After this, till near the end of the month, she remained free from pain, and even thought herself better: the jaundice, however, continued unaltered, the stools were pulpy and of a greyish blue colour, and she grew visibly thinner. In the early part of November, she began to suffer, at intervals, severe pain in the abdomen, which had become full and tympanitic: the pain occurred chiefly in the night, and opiates became necessary for its alleviation. The yellow colour of the skin assumed a slight tinge of green. She used at this time the nitro-muriatic bath for some days, without benefit. By degrees the abdominal pains became more frequent, and some tenderness was complained of when pressure was made upon the right hypochondrium; and she became more and more feeble and languid. In December, she began to experience pain at the epigastrium, of about half an hour's duration, immediately upon taking food, or drink, or medicine; and the pain was constant for a day or two before her death, which took place on the 14th.

The body was examined the next day.

The skin was universally yellow; the emaciation extreme.

The tympanitic condition of the abdomen had disappeared: its cavity being laid open, the liver was seen extending an inch or two below the ribs; just beyond its edge projected the distended gallbladder; and between this and the pyloric end of the stomach there was another prominence, in contact with the edge of the liver, and occasioned chiefly by a diseased condition of the pancreas. These were the irregularities which had been felt along the edge of the liver during the lifetime of the patient, and which had led to an erroneous conjecture that tubera existed in that

**viscus.** The liver itself was perfectly sound, but of a deep yellow colour, both on its surface and internally. The gallbladder very large and tense; the cystic duct of its ordinary caliber; the hepatic and common duct so dilated, up to the junction of the latter with the duodenum, as to be capable of admitting the extremity of the little finger: they contained a black, tarlike, somewhat grumous fluid, which was not rendered yellow by dilution.

That part of the pancreas which extends across the vertebral column was sensibly indurated, and its central duct distended considerably beyond its natural size, the enlargement increasing towards the duodenum. The head of the pancreas, or that portion of it which is connected by cellular tissue to the duodenum, was in some parts as firm as cartilage, whilst the intervening parts were of the consistence of a scrofulous mesenteric gland: the harder portions were white, roundish, and of irregular surface; the softer yellow, and apparently rendered so by the colouring matter of the bile. The mucous membrane of the stomach and pylorus was sound; a little way within the duodenum, there was a circular depression, nearly as large as a shilling: here the several coats of the intestine were found to be entirely destroyed; and the handle of the scalpel passed, with very slight pressure, into the diseased head of the pancreas, which supplied the deficiency in the proper parietes of the intestine. The mucous membrane immediately surrounding the depression was sound; but the disease had extended to that portion of the gut where the biliary and pancreatic ducts pass obliquely between its tunics to terminate on its internal surface: here the intestine, throughout its entire substance, was thickened and scirrhus; and the excretory ducts of the liver and pancreas impervious.

The colon was small. Some portions of it were considerably smaller than others; one of these contracted portions was so short as to present the appearance of a distinct stricture. The coats of this intestine, in the more contracted portions, were thicker than elsewhere, and the mucous membrane much puckered.

The left ovary was as big as an orange; its surface was streaked by large veins, and in some parts of a deep purple colour. A section of it laid open numerous cysts, containing each a viscid, glairy fluid, which varied in colour, in different cysts, from a pale amber to a dark purple.

The thorax was sound. The aorta contained fluid and very thin blood.

JOHN HUNTER, after stating that bile, when mixed with the blood out of the body, prevents its coagulation, adds, "but we cannot suppose that in a living body it can be taken into the blood in such quantity as to produce the effect." Could it have been so in this case?

Disease of the pancreas, of which each of these cases furnishes an example, is spoken of as rare by all systematic writers on pathology. ANDRAL's volume on the "Maladies of the Abdomen,"

contains one instance only of cancerous or other alteration of this gland. He remarks upon the infrequency of such morbid change, and says, with truth, that we generally find the pancreas untouched in the midst of the most extensive disorganization of the stomach, and of the tissues surrounding it. Dr. BAILLIE, in the volume of "Lectures and Observations on Medicine," printed after his death, states that the pancreas is, upon the whole, less liable to disease than any other important gland in the body. "I do not recollect," he says, "that in private practice I have met with one case in which there was satisfactory evidence of the pancreas being diseased; and I have only known of a solitary example of it during the thirteen years in which I was a physician of St. George's Hospital."

These cases afford also a sufficient illustration of the difficulty so often met with by the practical physician, of determining, from symptoms, the precise seat and nature of chronic disease within the abdomen; even when such disease has produced alterations of structure which are perceptible by the touch. The truth is that, of several of the abdominal viscera, the chronic diseases are marked by no *essential* symptoms, and that the *accidental* symptoms by which they may be accompanied relate as frequently to contiguous parts, as to the viscus primarily or principally affected.

#### ST. GEORGE'S HOSPITAL.

##### *Compound Fracture of the Leg, accompanied by Delirium Tramatiticum, treated with large Doses of Opium.\**

J. R., forty-five years of age, was admitted into St. George's Hospital on the evening of the 6th of November last, under the care of Mr. KEATE, with fracture of both bones of the left leg. The tibia was broken just below its centre, and badly comminuted. The compresses were soaked with blood, which had escaped from a small wound situated over the fracture, and now scarcely perceptible. The skin in the neighbourhood was thin and dark coloured, with several small vesications. The fracture of the fibula was at its upper part. The whole limb was swelled to a large size, partly from effused blood, but chiefly from œdema. The opposite leg was also œdematous.

The accident happened on the preceding evening, a few miles from town, and was produced by his attempting, when in a state of intoxication, to get on a coach, which was moving at a rapid pace. One of the wheels is said to have struck the limb, but not to have passed over it.

His general appearance was very unfavorable, the complexion being sallow, interspersed with spots of acne rosacea: his sharp sunken eye, with the arcus senilis, his scanty grey hairs, and trembling hand, bespoke premature old age. He must once have

\* Medical Gazette.



been a stout man, but was now thin, and of a relaxed fibre. He stated himself to have been a wine and spirit merchant, in respectable circumstances, and confessed that he was addicted to the immoderate use of both spirituous and fermented liquors; that he had been occasionally the subject of gout; and, judging from his own account, had once or twice suffered from symptoms resembling delirium tremens; notwithstanding which, he described his general health as being tolerably good. Since the accident, he had suffered from troublesome diarrhœa, and had had no sleep. The pulse was eighty-six and steady; skin cool; tongue furred in the centre, but moist; leg not very painful. Limb placed in a junk, to be kept wet with a strong camphorated spirit lotion; and he was ordered Liq. Opii Sedativ.  $\mathfrak{m}l.$  ex haust. Camph.  $\mathfrak{z}iss.$  statim.

In two hours after, being restless, the draught was repeated, with  $\mathfrak{m}xxv.$  of the Liq. Opii.

8th.—Limb going on favorably. The wound has healed, and the appearance of the skin has greatly improved; the diarrhœa has ceased. He has been taking the following draught every six hours: Liq. Opii Sedat.  $\mathfrak{m}xxx.$ ; Ammon. Carbon. gr.  $vj.$ ; Mist. Camph.  $\mathfrak{z}iss.$  His nourishment has consisted of beef-tea, arrowroot, &c. Has had little or no sleep since his admission.—To repeat the draught, with an increase of  $\mathfrak{m}xx.$  of the Liq. Opii at bedtime, and to have  $\mathfrak{z}ijj.$  of gin daily.

9th.—Last night he became very restless, tossing about in and attempting to get out of bed, and talking much of law business in which he was concerned; but, when spoken to, he answered rationally. The pulse became less steady in its beat, and quicker. Some strong gin and water was given him, and a double dose of opium. He slept a little towards morning, but even then he kept constantly moving the limb about in bed. He is today much more composed, but quick and irritable in his manner. Pulse upwards of 100; tongue furred; bowels confined.—The limb to be placed in Amesbury's apparatus. To repeat the draught of Liq. Opii Sed., with a drachm dose at bedtime, and to have six ounces of gin daily.

10th.—Another restless night, and no sleep; the bowels have acted freely from opening medicine. He states that he has been in the habit, when not well, of occasionally taking the Tinct. Opii in drachm doses.—To continue the draught every six hours, with a drachm of Liq. Opii Sed. in each.

11th.—Last night the delirium and restlessness greatly increased, and, in the absence of the nurse, he got out of bed and began to dress himself. On being spoken to, his answers were quite rational, although his manner was extremely quick and irritable. Pulse today ninety-six, of sufficient strength; bowels open; tongue clean; leg looking well: the bones are kept in good apposition by the apparatus, in spite of his constant motion.

12th.—Last night the delirium, &c. became worse than ever, and he was with difficulty kept in bed. At eleven P.M. three

grains of the Ext. Opii were given him, and repeated at intervals of two or three hours. During the night he took nine grains of opium, which did not procure him any sleep. Today the pulse is 100; tongue a little furred; the leg more swelled.—To discontinue the six-hour draught, and to take every two hours three grains of the Ext. Opii.

Nine p.m.—Having taken two doses without any effect, four grains of the powdered opium, with a quarter of a grain of Ant. Tart. were administered, and one pound of porter was given him; soon after which he fell asleep, and slept soundly for several hours, during which time both hands and legs were observed to be constantly in motion, and he sometimes struck one side of the face with one hand, and the other side with the other, for a minute together without awakening, and made other odd gestures.

13th.—Last night, at ten p.m., he took one five-grain dose of Pulv. Opii; soon after which he fell asleep, and slept soundly the whole night. He is today much better, but very irritable. Pulse 100; tongue furred; bowels confined; leg doing well, but of large size; fluctuation of fluid to be felt over the fracture.—To continue the gin, porter, &c.

14th, eight a.m.—Since yesterday he has taken twelve grains of Pulv. Opii, but has not once slept, and passed a very restless night; but is in other respects the same.—To have Oss. gin daily, and to take the opium in seven-grain doses.

15th.—Up to ten o'clock last night, he had taken during the day twenty-eight grains of Pulv. Opii; was now given a ten-grain dose, but he passed a sleepless night, although quieter than the last. Today, however, he is very restless, with constant starting of the limb, which he says is produced by some one striking him violently on the calf of the leg, with a stick or stone. Talks sensibly, but wanders at times. Pulse ninety; tongue furred; bowels open.—It was now directed that he should take one grain of the Acetate of Morphia every two hours. The stimuli to be continued.

16th, ten a.m.—Since yesterday morning he has taken nine grains of the morphia, without any effect, his night having been worse than any since his admission; the delirium, &c. being constant. The leg is doing tolerably well, although the bones have been a little displaced by his jumping out of bed; fluid over the fracture becoming absorbed.—Rep. gin, porter, &c.

N.B. The acetate of morphia is known to be good, having been procured at Mr. Garden's, in Oxford street.

17th.—Up to six o'clock last evening, he had taken a scruple of powdered opium, and a drachm of the Tinct. Opii had been given by the rectum, but he remained as restless as ever. He now took a scruple dose of crude opium, soon after which he fell asleep, and continued to sleep soundly for five or six hours. Today he is quite a different man, being much less irritable, &c. Pulse ninety, wanting power; bowels open. The fluid over the fracture has become absorbed. The leg is doing well, but becomes so much

swelled towards night as to require all the straps of the apparatus to be loosened.—To take the gin as usual, with  $\frac{1}{2}$ ij. of porter, and meat diet.

18th.—Towards evening delirium came on, with great restlessness. A scruple of crude opium was given him, but not producing any effect, ten grains more were administered; after which he slept soundly for many hours, and is today better than he has ever been since his admission.

19th.—Took a scruple of crude opium last night in two doses, and slept well. Leg going on favorably; much less starting of the limb.

20th.—An attempt was made last night to reduce the dose of opium to fourteen grains, but he became very restless, and it was found necessary to give half a scruple more; after which he slept tolerably well, but is more irritable in his manner today.

22d.—For the last two nights he has taken each night a scruple of the crude opium, and has rested well. This has always been given in two doses, the second not being given till his restlessness, &c. required that it should be administered. Leg examined, and union found to be very considerably advanced.

24th.—Not quite so well, and last night he took half a drachm of the crude opium before sleep could be produced. He yesterday began to complain of pain and stiffness about the right shoulder, but nothing can be discovered in this situation to account for it: thinks himself that it is rheumatic.

27th.—Since the last report he has continued to take a scruple dose of crude opium at bedtime, combined with a scruple of *P. Ipecac. comp.* The delirium has been very slight, but no sleep could be procured without the opiate. He still complains of the pain in the shoulder, which is now swelled and somewhat tender, but moving the arm does not produce pain; has had no rigors.

29th.—The tumor in front of the shoulder-joint has increased to a large size, and fluctuation is distinct. No rigors, but considerable febrile disturbance. Has taken no opium since the evening of the 27th: no delirium; has rested tolerably well; leg going on as well as possible.—Ordered *Bark*, with the ammoniated Tincture of *Bark*, every six hours. To take *Oss.* of red wine daily, with the porter and fish diet. Discontinued the gin.

December 1st.—Abscess punctured, and a large quantity of well-formed pus evacuated, which did not in anywise communicate with the joint, but a probe passed to the under surface of the scapula.—A poultice to the shoulder.

15th.—There has been no return of delirium, and he has only occasionally taken a small dose of *Tinct. Opii* at bedtime. The discharge from the abscess has greatly diminished. The apparatus was removed from the leg ten days back, the bones having become well and firmly united; common splints applied. General health much improved. He continues to take the bark, wine, porter, &c.

On the 18th of January, the abscess having been healed up for

some days, and the leg being quite strong, he was discharged cured.

N.B. During the period at which he was taking the opium, the bowels were not more confined than they would probably otherwise have been, and were easily acted on by half an ounce of *Haust. Sennæ*. On leaving off the opium he had a diarrhœa, which was restrained by the usual remedies.

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BIRMINGHAM GENERAL DISPENSARY:

*Case of Retroverted Uterus, treated by Puncture of that Organ.* By J. M. BAYNHAM, Surgeon to the General Dispensary and to the Town Infirmary of Birmingham.\*

THE consequences of retroversion of the uterus have been so often fatal, that a case successfully treated by surgical operation cannot be devoid of interest. The practice adopted in this instance will be found uncommon; and, since it led to a successful issue under the most unpromising circumstances, deserves to be recorded.

Hannah Martin, aged thirty, of spare make, was admitted a patient of the dispensary, 28th of March, 1828. She was then in the sixth month of her second pregnancy, the history of her case to which period is briefly as follows:

When employed six weeks previously in moving a heavy weight, she suddenly felt acute pain in the lower part of the belly. To this, however, little importance was attached at the moment. Two days afterwards retention of urine occurred, with almost constant pain. The nature of the case appears to have been overlooked by the gentleman consulted in the first instance, since the use of a catheter was not proposed. She had dripping of urine, with progressive enlargement of the abdomen during the next month; at the end of which time, finding no relief in medicine, she applied to another surgeon, who, by the introduction of a catheter, obtained eight pints of urine in the morning, and nearly the same quantity seven hours afterwards. No examination, per vaginam, was even now instituted, and, of course, no permanent relief secured to the patient, the catheter only being used night and morning in the next fortnight. When recommended to the dispensary, she had kept her bed three weeks, and was in a state of high fever; her pulse 136, short and indistinct. She had frequent vomiting, constant micturition, tenesmus, fulness, tension, and tenderness of the abdomen.

In my first attempts to pass a catheter, I was embarrassed by the altered state of the external organs; a large portion of the vagina being prolapsed, and the clitoris and nymphæ greatly enlarged. The urine which escaped by the instrument resembled

\* *Edinburgh Med. and Surg. Journal*, April 1830.

the contents of a psoas abscess, but was much more fetid. The entire cavity of the pelvis was occupied by a tumor, which caused protrusion of the anus, and also eversion of the lower extremity of the bowel. The mouth of the uterus was far beyond the reach of the finger, and the fundus of this organ was situated less than one inch from the anus; a circumstance which rendered the admission of the finger into the rectum a work of much difficulty. Feeling satisfied that no urine remained in the bladder, I attempted to replace the uterus by a gradual introduction of the whole hand into the vagina. The os uteri pointed directly upwards, and was raised above the pubis: in fact, the retroversion was complete.

Having persevered as long as seemed consistent with the safety of the patient, I requested the attendance of two of my colleagues, and they met me in consultation the same afternoon, (March 28.) She had become much more exhausted and restless. Her anxiety of manner, and the failure of her pulse, leading us to suppose that she was nearly moribund, I proposed the immediate introduction of a trocar into the uterus, for the purpose of lessening its volume. Preparatory to any other steps, the catheter was again used, and having then placed the woman upon her elbows and knees, I once more endeavoured to raise the tumor, but not succeeding better than before, I slowly passed my hand into the rectum, and, adapting it as far as possible to the base of the tumor, continued for some time to make the firmest pressure, without sensible advantage.

Mr. BLOUNT, one of the gentlemen present, in the expectation of a better result, desired to satisfy himself of the impracticability of success before the operation of puncture was adopted. Having passed his finger into the os uteri, he endeavoured to rupture the membranes; but, although assisted by a curved metallic instrument, he was compelled to relinquish his purpose, and all other expedients to relieve the patient having failed, it was determined to employ the trocar. In this proceeding I selected the most prominent point of the tumor in the rectum.\* The entrance of the trocar not being followed by any discharge, it was withdrawn, and introduced a second time in nearly the same situation. About twelve ounces of colourless fluid now escaped by the canula, but not without frequently changing its position; since the opening was at times obstructed by the presence of the child. The fulness of the uterus having thus been diminished, attempts were again made to

\* Mr. BAYNHAM states, in a subsequent part of his communication, that although in this case the operation was performed by the rectum, he does not consider this an eligible situation. It was selected because the uterine tumor may be said to have pointed most distinctly in the bowel. Perforation of the uterus through the vagina he deems preferable, since, without an equivalent advantage, even so small a wound of the intestine ought to be avoided. Moreover, Mr. B. remarks, there will be less probability of injuring the placenta, which is usually attached to the fundus, and trifling as the chance may be of preserving the fœtus, it is entitled to consideration.

carry it above the brim of the pelvis, and this was affected in less than a quarter of an hour. When the organ had recovered its proper situation, the os uteri was found partially dilated, and the membranes somewhat protruding. A full opiate was prescribed, and the woman passed a better night than any in the previous month.

The next morning, although still in a state of great exhaustion, she was decidedly improved. Labour pains occurred in the evening of the 29th, and less than one hour sufficed, fortunately without hemorrhage, to exclude the contents of the uterus, twenty-five hours after the operation. The ovum was entire, the membranes perfect, and still retaining ten ounces of liquor amnii untinged with blood. The fœtus was perfectly fresh, and of the ordinary size at six months. The trocar both times had penetrated the substance of the placenta near to the insertion of the cord, and once had entered the abdomen of the child; forming an aperture through which nearly the whole of the small intestines were forcibly protruded by the pressure subsequently used. The second puncture was referrible to this unavoidable accident. It is worthy of remark, that, notwithstanding the placenta was twice perforated, hardly a teaspoonful of blood was lost.

The catheter was used but once after this time, when a pint of equally offensive urine was evacuated. Incontinence then supervened, and lasted nearly five weeks; and severe pains continued to be felt in the pelvis for some time. Copious vaginal discharge, added to the stillicidium urinæ, kept up a state of soreness and excoriation; and it was not until after a month that her urine lost its fetor. Considerable masses of coagulated lymph were often discharged, and at separate times four pieces of regularly organized membrane, which were mistaken for portions of the bladder, but which subsequent events happily proved to be parts of the vagina only. At the end of April she had the satisfaction of holding small quantities of urine, and in a fortnight could retain it almost as well as before her illness. The rectum was longer in recovering its tone than the vagina; purulent evacuations taking place from the former passage, with frequent and sometimes distressing tenesmus, until after she was in other respects well. It is probable that an abscess formed in the cellular substance, between the vagina and rectum, since the matter voided per anum was different, and more in quantity than the mere surface of the bowel could have yielded. She kept her bed three weeks before she applied to the dispensary, and did not leave it until nearly a month afterwards. Upon the 7th of May, she was sufficiently recovered to leave home and engage in her usual occupation. Menstruation occurred in the first week of June, and she has continued in good health since that period.\*

\* Mr. Baynham adds to the relation of this interesting case many important remarks, for which we must refer to the original.—EDITOR.

## HOPITAL DE ROVIGO.

*Cure of a Vesico-Vaginal Fistula by the actual Cautery.\**

ON the third day after a natural but tedious labour, the patient in this case found that she had not the power of retaining her urine. Upon examination, several callous ulcers were detected near the vaginal orifice, which were successfully treated by anti-syphilitic means, and she was discharged in forty days. At the expiration of three months she returned to the hospital, still complaining of incontinence of urine, of which she confessed she had before only pretended to be cured, in order that she might return home. As it was suspected that there was a paralytic affection of the neck of the bladder, astringents, tonics, and other remedies, both general and local, were used, but without avail. Saturnine injections by the urethra suspended the involuntary discharge of the urine for a few days, but it returned.

Dr. BELLINI again examined the patient per vaginam, and now ascertained that there was a small opening near the os uteri, through which the urine escaped. He at first believed that pressure upon the parts, by the head of the child, which had remained above the superior aperture of the pelvis for upwards of forty-eight hours during labour, might have occasioned this wound; but it was subsequently thought that the mischief had been produced by syphilitic ulceration. A mercurial treatment was adopted, and plugs of lint steeped in a solution of corrosive sublimate were passed into the vagina.

The involuntary flow of urine still continued, and Dr. B. was now convinced that it was necessary to destroy the callous edges of the wound, to give it a chance of healing. He introduced into the vagina a silver canula, which he guided with his finger; through the canula he passed a small iron rod, heated to a white heat, with which the edges of the wound were destroyed. The wound speedily healed, and the patient was entirely cured.

\* Annali Univ.

## CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim  
illa, prius, cretâ; mox hæc, carbone, notamus.—PERSIUS.

*A Treatise on Poisons, in relation to Medical Jurisprudence, Physiology, and the Practice of Physic.* By ROBERT CHRISTISON, M.D. &c. &c.

IN our Number for February, we analysed and reviewed the general doctrines of toxicology contained in Professor CHRISTISON's work; and we now proceed to present our readers with an account of the manner in which he has treated of poisons individually. In executing our purpose, we shall follow the order traced out by the author, with the exception that we shall exclude the chapter on arsenic; as the facts and experiments on that subject detailed in the present work must be already familiar to medical men in general, through the excellent essays formerly published by the author.

I. And first of the Irritant Poisons, which are divided into five orders: the acids and their bases; the alkalies and their salts; metallic compounds; vegetable and animal irritants; mechanical irritants. In discussing the effects of the mineral acids, our author is largely indebted to the excellent memoir of TARTRA.\* Poisoning by the mineral acids has been chiefly the result of suicide or accident: instances of criminal poisoning by the mineral acids have, however, occurred, and of late years "the crime of disfiguring the countenance, by squirting oil of vitriol on it," has arisen, and is made by law a capital offence.

"M. Tartra considers that four varieties may be observed in the effects of nitric acid and other mineral acids: 1. Speedy death, from violent corrosion and inflammation; 2. Slow death, from a peculiar organic disease of the stomach and intestines; 3. Imperfect recovery, the person remaining liable ever after to irritability of the stomach; 4. Perfect recovery."

We shall speak only of the immediate and violent consequences of the mineral acids: these are, symptoms of violent gastritis, accompanied with burning of the throat, eructations, and an excruciating pain of the stomach. The lips are commonly shrivelled; at first whitish; afterwards, if from nitric acid, yellowish; if from sulphuric acid, brownish. The inside of the mouth is also generally shrivelled,

\* *Traité de l'Empoisonnement par l'Acide Nitrique.* 1802. Paris.



white, and often more or less corroded; and, as the poisoning advances, the teeth become loose and yellowish brown. This discoloration has taken place in so short a time as three hours. The matter vomited is generally brownish or black, and causes effervescence on the pavement, if it contains lime. Afterwards this matter is mixed with shreds of membrane, which sometimes actually consist of the disorganized coats of the stomach, but are generally only coagulated mucus. The bowels are obstinately costive, the urine scanty or oppressed; and the patient is frequently harassed by distressing tenesmus and desire to pass water. The pulse is all along very weak, and towards the close imperceptible, sometimes intermitting. It is not always frequent; on the contrary, it has been observed of natural frequency, small and feeble, in a patient who survived fifteen days. The countenance becomes at an early period glazed, and the extremities cold and clammy. The breathing is often laborious, the movements of the chest increasing the pain in the stomach, independently of the pulmonary inflammation which is also at times present. To these symptoms are added occasional fits of suffocation, from the shreds of thick mucus sticking in the throat.

Such are the *usual* symptoms, but it must not be supposed that they are always so well developed. The duration of this kind of poisoning is commonly between half a day and two or three days; but the fatal event has taken place in very few hours, or it may be deferred for many days. The smallest fatal dose of sulphuric acid recorded was one drachm; a man has recovered after taking six drachms.

Death may result from these poisons, Dr. Christison hints, from their effects on the gullet producing dysphagia, or by exciting inflammation and spasm of the glottis and larynx.

In the treatment of this form of poisoning no delay is allowable. Chalk or magnesia are the antidotes which ought to be preferred; but, if it will consume time to procure them, a solution of soap should be administered, and, during its preparation, dilution with milk or oleaginous matters should be used. The carbonates of the alkalis are ineligible. After the proper antidote has been given to a sufficient extent, the use of diluents ought to be continued, as they facilitate the vomiting. Subsequently, the usual remedies for inflammation may be requisite.

We pass over the chemical analysis (pp. 120 et seq.) which, however, display the author's usual talent and delicacy of manipulation. The processes for detecting

sulphuric acid are easily performed, and are decisive: those for nitric and muriatic acids are not so satisfactory.

The chapter on phosphorus, sulphur, chlorine, and iodine, calls for no particular observation from us. The essay of Dr. GAIRDNER contains an excellent case, illustrative of the irritant effects of large medicinal doses of iodine.

Oxalic acid is the last poison of the present order, but its effects and antidotes are so well known as to require but little remark. One attempt has been made to make it an instrument of murder.

Instances of death from this acid have, it is well known, almost invariably arisen from the accidental substitution of it for the sulphate of magnesia. So close, indeed, is the resemblance of these two salts, that "repeatedly," says Dr. C., "in desiring several persons (qualified to form a probable judgment, of course,) to point out which was the poison and which the laxative, I have found as many fix on the wrong as on the right parcel. The sulphate of magnesia has, of course, a very different taste, being strongly bitter. Various plans have been devised for preventing the accidents to which this unlucky resemblance has given rise. The best of them imply the use of a criterion or safeguard by the patient before he takes his laxative draught. It seems to have escaped the notice of those who have proposed the plans in question, that, if accidents are to be prevented in this manner, by far the simplest and most effectual security will be to let the public know that a laxative salt ought always to be tasted before it is swallowed."

The proper antidotes for oxalic acid are chalk or magnesia, with which insoluble oxalates are formed. The soluble oxalates of potass, &c. are nearly as poisonous as the acid itself. Diluents should not be used unless the vomiting is free, as they favor the absorption of the acid. If (after poisoning by a concentrated solution of oxalic acid,) the stomach is examined immediately after death, little corrosion will be found, compared with what is seen if the inspection be delayed a day or two.

In instancing the periods within which oxalic acid has proved fatal, Dr. Christison has quoted a case\* by Mr. FRAZER, which he describes as having terminated fatally at the end of twenty-three days; but this is a mistake, the patient having survived but fourteen days. He swallowed

\* Edinb. Med. and Surg. Journal, xiv. 606.

the poison on the 16th of the month, (it is printed the 6th, hence the mistake,) and died on the 29th. It has proved fatal in ten minutes, and repeatedly within an hour.\*

2. The alkalies and alkaline salts are, for the most part, local irritants. Some of them likewise act indirectly on distant organs, and a few are more distinguished by their remote than by their local effects. Dr. Christison divides them into two groups, the one embracing the two fixed alkalies, with their carbonates and nitrates, and also lime; the other ammonia, with its salts, and likewise the alkaline sulphurets.

"In the treatment of poisoning with the alkalies, the first object is evidently to neutralize the poison. This may be done either with a weak acid or with oil." The acetic is to be preferred. "Very lately, however, a French physician, M. Chereau, has stated that, for the mineral alkalies and their carbonates, fixed oil is a preferable antidote; and he has given the heads of two cases of poisoning

\* We are indebted to a friend for the two following cases of poisoning with oxalic acid.

A farmer, in August 1825, took a quantity of oxalic acid (supposed to be an ounce,) in mistake for Epsom salts. He was seen in about an hour afterwards. He complained of burning heat in the mouth, throat, and stomach; great thirst, and inclination to vomit. The tongue was swollen; the countenance betrayed great anxiety; the pulse small, quick, and irregular; and his appearance showing great suffering and distress. Chalk and milk were given in large quantities, and in about ten minutes the pain and heat began to abate. An emetic was then administered, and afterwards repeated, so as to wash out the stomach, as it were, for nearly two hours, until all pain and heat had nearly subsided. He continued the chalk and milk for two or three days; and, with the use of mild purgatives, gradually recovered in three or four weeks.

"A butcher, in April 1829, took a quantity of oxalic acid (supposed 3ss.) intentionally. He was visited in fifteen or twenty minutes. He had been previously drinking, and was found nearly in a state of insensibility, as was supposed from that cause. The pulse was so small as scarcely to be felt, tongue rather swelled, and the eyes fixed. With some difficulty, chalk and water was administered, and afterwards an emetic, the operation of which roused him from his stupor. The chalk and water were continued; and the next morning he was able to go out and follow his business.

The former of these cases, if compared with the one related by Mr. FRAZER (Edinb. Med. and Surg. Journal, xiv.) will show the superior neutralizing power of the chalk over magnesia, or at least the comparatively innocuous power of the compound thus formed. Mr. Frazer's patient took half an ounce, and the magnesia was freely administered in something more than forty minutes, yet he lost his life, from the disorganization of the villous coat of the stomach, &c., after fourteen days. In the case above quoted, an ounce was swallowed, the remedy was not administered for an hour, yet the relief was decided and permanent; for, although the man suffered from stomach complaints for more than three weeks, we understand the symptoms were such as to cause no anxiety for the result.

In the latter of the two cases, the antidote, administered in about twenty minutes, was so efficacious that the man was enabled to enter on a considerable journey on the following morning.

with large doses of carbonate of potass, in which the free employment of almond oil prevented the usual fatal consequences. It appears to act partly by rendering the vomiting free and easy, partly by converting the alkali into a soap. It must be given in large quantity, several pounds being commonly required." (P. 159.) An interesting case of accidental poisoning by American potass in a state of deliquescence, successfully treated by Mr. CUMIN, of Glasgow, is related in the last volume of the Edinburgh Med.-Chirurgical Transactions.

Cases of accidental death have occurred from swallowing Lime, but it is a feeble poison. "When thrown into the eyes, it causes acute and obstinate ophthalmia, which may end in loss of sight: on this account it will belong, I presume, to the poisons included in the Scottish act against disfiguring or maiming with corrosives."

Some years since we saw a case, which, under a less fortunate termination, might have become the subject of judicial investigation. A man had a large sarcomatous tumor situated at the back of the neck, which, if removed, would have weighed probably two pounds. A quack, to whom he applied, recommended the application of quick lime to the whole tumor. Extensive inflammation and ulceration followed the application; the ulcers were very ill conditioned, and attended with fever and gradual emaciation. For more than a year the man's recovery was doubtful; eventually, however, he did recover, the tumor having at length entirely disappeared.

Under the head of Ammonia, three cases of violent inflammation of the mucous membrane of the air-passages, from the excessive *inhalation* of ammonia, are described. Two of these proved fatal; and M. NYSTEN has recorded the morbid appearances discovered in one: "The nostrils were blocked up with an albuminous membrane; the whole mucous membrane of the larynx, trachea, bronchi, and even some of the bronchial ramifications, was mottled with patches of lymph; the gullet and stomach showed red streaks here and there." (P. 168.) It is worthy of observation, that the remote nervous symptoms which sometimes occur from ammonia, when taken in poisonous doses, were not observed in these cases.

Four cases of poisoning in the human subject by liver of sulphur (sulphuret of potass) have been related. "Of these cases two have proved fatal, both in less than fifteen minutes, and the symptoms preceding death were acrid taste, slight vomiting, mortal faintness, convulsions, and a

striking chemical sign, the tainting of the air of the chamber with the odour of sulphuretted hydrogen. The dose in one case was about three drachms." (P. 171.) These observations manifest the impropriety of employing this substance as a remedy in poisoning by arsenic, which has been done occasionally.

In this kind of poisoning, the most appropriate treatment "seems to consist in the instant administration of any diluent which is at hand, the subsequent exhibition of frequent doses of the chloride of soda, (common salt,) and then the antiphlogistic mode of subduing inflammation. The chloride of soda or lime may be called the antidote against this poison, as it decomposes the sulphuretted hydrogen which is evolved, and the rapid disengagement of which is the probable cause of death in the quickly fatal cases. The symptoms, at least, are very nearly those of poisoning with sulphuretted hydrogen when introduced into the system in a more direct manner." (P. 171.)

The preparations of *mercury* have been often employed for criminal purposes, and thus become the subject of judicial inquiry.

"In another respect, too, they claim the regard of the medical jurist: their effects on the body when insidiously introduced in the practice of the arts in which mercury is used, form a branch of that department of medical police which treats of the influence of trades on the health." (P. 268.)

The chapter on Mercury is very valuable. The chemical details are ingenious, and the modes of analysis recommended simple, decisive, and easily executed.

*On the mode of action of mercury, and the symptoms it excites in man.* The effects of mercury on the animal body are more diversified than those of any other poison; but its various compounds have not all been experimentally examined with equal care: the more immediate and prominent properties of corrosive sublimate have been chiefly elucidated; and Dr. Christison states, as the result of the inquiry, "that corrosive sublimate causes, when swallowed, corrosion of the stomach, and, in whatever way it obtains entrance into the body, irritation of that organ and of the rectum, inflammation of the lungs, depressed action, and perhaps also inflammation, of the heart, oppression of the functions of the brain, inflammation of the salivary glands." (P. 289.) But in man other organs still are implicated.

Dr. Christison notices at some length the controversy connected with its mode of action, namely, whether, before it can exert its remote action, it must enter the blood. "The chief facts in support of the affirmative may be arranged under three heads. Some relate to the discharge

of metallic mercury from the living body during a mercurial course for medicinal purposes; others to the discovery of metallic mercury in the dead body, in the like circumstance; and others to the detection of mercury by chemical analysis in the fluids and solids, during life or after death." (P. 290.) The first series of facts is well illustrated by the quotations of Dr. Christison; and the second also by the satisfactory case of Rigby Brodbelt, (Mem. Lond. Med. Soc. v. 112,) which might be further supported by reference to the observations of some modern pathologists; for instance, Lobstein and Otto.\* On the last head the facts are contradictory, but "they furnish at least a presumption that it is present in some circumstances in the animal fluids." (P. 293.) But the chemical investigation is attended with very considerable difficulty, and certainly the negative evidence from this source is any thing but decisive.

"The cases of poisoning with mercury, which have been observed in the human subject, may be conveniently arranged under three varieties. In one variety, the sole or leading symptoms are those of violent irritation of the alimentary canal. In another variety, the symptoms are at first the same as in the former, but subsequently become conjoined with salivation and inflammation of the mouth, or some of the other disorders which indicate mercurial erethism, as it is called. In a third variety, the preliminary stage of the last is wanting, and the symptoms are from the beginning those of mercurial erethism, in one or other of its multifarious forms.

"The first variety of poisoning with mercury is remarked only in those who have taken considerable doses of its soluble salts, particularly corrosive sublimate. The second is caused by the same preparations. The third may be caused by any of the compounds of mercury." (P. 294.)

In the first variety, the symptoms of irritation of the throat and stomach appear earlier than from arsenic; the taste (from sorrosive sublimate) is more strong and unequivocal, and the sense of acridity is usually much stronger, and the burning tightness of the throat very considerable; the countenance is much flushed and swelled; painful micturition is also common, sometimes even ischuria renalis; and there is a good deal of uniformity in the symptoms from this poison. Dr. Christison states the ordinary duration in fatal cases from twenty-four hours to three days, the shortest eleven hours; but these limits he does not state with confidence.†

\* *Lehrbuch der Pathologischen Anatomie*, u. s. w. Berlin, 1830, p. 157.

† We saw, some years ago, a case of poisoning with corrosive sublimate, which terminated fatally fourteen days after taking the poison. A young

Of the second variety of mercurial poisoning, Dr. Christison has quoted a striking example from the 41st volume of this Journal.

The third variety of poisoning with mercury comprehends all the forms of what is called mercurial erethism; and these are "most frequently the consequence of the milder compounds of mercury, either given medicinally in frequent small doses, or applied continuously to the bodies of workmen who are exposed by their trade to its fumes." (P. 301.) Dr. Christison's remarks apply to salivation and the *tremblement mercuriel*, or shaking palsy.

As the phenomena of mercurial salivation have been often known to yield important evidence, and have led to contrariety of opinion upon trials, they deserve particular attention.

Fifteen grains of bluepill, taken in three doses, one every night, have excited fatal salivation. Two grains of calomel have caused ptyalism, extensive ulceration of the throat, exfoliation of the lower jaw, and death. On the other hand, some constitutions and states of disease resist the action of mercurials very obstinately.

But salivation may be an idiopathic disease, or the effect of imagination, or produced by other substances than mercury, namely, preparations of gold,\* or copper, antimony, iodine, croton oil, foxglove, and even opium; and, as the evidence of salivation may be quoted as proof of mercurial poisoning, it is important to ascertain the distinguishing signs of true mercurial ptyalism.

"In general, mercurial salivation may be easily distinguished from all the preceding varieties by an experienced practitioner. . . Its characters are quite distinct at the time salivation just begins: the fetor of the breath, and sponginess and ulceration of the gums at this stage, distinguish it from every other affection. But if the state of the mouth is not examined till the ulcers have existed se-

woman, in the fourth month of pregnancy, swallowed a large dose of corrosive sublimate, certainly more than a drachm. An hour and a half elapsed before any antidote could be administered; during that time she had been sick, and the vomiting had been promoted. The free administration of white of egg relieved all the urgent symptoms, and it was hoped that the case would end well. During the two or three following days, the patient complained but little; she had, however, griping, with a good deal of pain in the rectum, and tenesmus. At the end of a week, moderate salivation came on; the bowel complaint rather increased; but the most conspicuous symptoms were low fever, with very dry skin and rapid emaciation. At the end of a fortnight she miscarried, and sunk in a few hours under the trifling hemorrhage which succeeded. Up to the time of abortion, she had been able to walk about and go out of doors.

\* We last year saw, in the Hôpital Beaujon at Paris, a case of extensive ulceration of the throat, with loss of substance, following salivation produced by one of M. Chretien's preparations of gold.

veral days, the characters of the mercurial disorder are much more equivocal. They cannot be distinguished, for example, from some forms of idiopathic ulceration of the mouth connected with unsoundness of constitution, and characterized by extensive sloughing, ptyalism, and gangrenous fetor." (P. 306.)

But a long interval may elapse after the administration of the mercury has been abandoned, before the effect on the salivary organ begins; mercury in small doses being a "*cumulative poison*." Swédiaur has met with instances where the interval was several months; Cullerier, with a case in which it was three months. And, after the remission of the mercury, the ptyalism may continue for a long period: Linnæus met with an instance of its continuing inveterately for a whole year; and M. Colson knew an individual whose salivation continued during six years. After an ordinary mercurial course, the mouth and salivary glands generally return to the healthy state in the course of a fortnight or three weeks. Ptyalism, in some rare instances, may recur after a considerable interval; no more mercury having in the interim been administered. The testimony to this fact of Messrs. Bromfield and Howard, of the Lock Hospital, on the trial of Miss Butterfield, apparently led to her acquittal.

Death from salivation may result from extensively spreading gangrene; from exhaustion from profuse and protracted discharge of saliva; and Dr. Christison has seen it fatal by inducing laryngeal phthisis. (P. 509.)

Dr. Christison's remarks on *shaking palsy*, or *tremblement mercuriel*, are derived chiefly from Mérat, (*Traité de la Colique Metallique*.) In the eighth and ninth volumes of the Edinburgh Med. and Surg. Journal will be found some valuable remarks on this state by the late Dr. Bateman, which Dr. Christison has not noticed. According to Mérat (Christison, p. 311,) the tremors are cured easily, though slowly, some months being required. Dr. Bateman, on the contrary, concurs with Fernelius in considering them "*tremores immedicabiles*." At the expiration of several months, it is certain that the tremors in his patient were unaltered.

In vol. ix. of the London Med.-Chir. Transactions, Dr. Bateman has described his own case of mercurial erethism, in which violent and irregular action of the heart was induced, with sense of constriction in the region of the diaphragm. This case, it will be recollected, was of long continuance, and was successfully treated with stimulants. In vol. xiv. of the Edinburgh Med. and Surg. Journal, two analogous cases are related by Dr. Astbury. In these



cases the muscles of respiration appear to have been partially paralysed. One terminated fatally from paralysis of the heart. In the year 1818, we had an opportunity of observing a similar case. A stout man, convalescent from a slight attack of inflammatory typhus, was taking purgatives with a little calomel each night, for four or five successive nights. At the end of this time, being pretty well and taking exercise, he complained of pain about the sciatic nerve of one side, with some inability in moving the affected limb. The eyes were heavy, watery, and a little suffused, and the breathing not quite free. His complaints, however, did not appear of importance: but, on the second night from this invasion, he became suddenly very ill; his breathing slow, laborious, and irregular, with rattling in the throat; the pulse not exceeding forty in a minute, and irregular; very profuse perspiration, with great prostration of strength. The mind was clear and tranquil. Stimulants were administered continually; and, if they were remitted for ten minutes, he appeared to be threatened with immediate cessation of breathing and of the heart's action. The doors and windows of the apartment were kept open, at the earnest request of the patient. During the night he took two bottles of wine, in addition to brandy and water, ammonia, and ether. The latter, with assa-fœtida mixture, appeared to produce the greatest relief. At the expiration of about eight hours, amendment was perceptible, and became progressive; and in a few days he had pretty much recovered. He has since enjoyed very good health. Dr. Bateman derived the greatest relief from musk. Mercury in its metallic state is probably inactive. "It has been said," says Dr. C. "that patients who have taken it for obstructed bowels have sometimes been salivated. This accident, though exceedingly rare, has nevertheless, I believe, happened in a few instances in which the mercury was retained long in the body. Fluid mercury, then, is probably not altogether inactive, speaking medicolegally. But this admission is no argument in favor of the metal being physiologically a poison; because, in the course of the cases referred to, a part is, in all likelihood, oxidated by the oxygen in the intestinal gases."

The *sulphurets* do not possess any deleterious action. The *red precipitate* and *turbith mineral* are irritants, and will produce erethism; but they are not escharotics, that is, they do not chemically corrode the animal textures. Of corrosive sublimate we have said enough. The nitrates, like the latter, are corrosive. The cyanide resembles corrosive sublimate, except that it does not chemically corrode.

Calomel is an irritant; but the practice followed by the East and West India practitioners of administering large doses in certain diseases, shows that it is not so under all circumstances. Probably it may be correct to transfer the reasoning of Rasori on the effects of emetic tartar to calomel, namely, that it operates on the animal economy very differently in a state of health and disease. Without doubt the impurity of the preparation may be an occasional source of mischief; and we submit that Mr. Howard's mode of preparing it should be always practised to ensure a uniform preparation. Dr. Paris, in his *Pharmacology*, observes that Howard's calomel is more active than that prepared according to the *Pharmacopœia*, probably from its state of minute division.

In poisoning by corrosive sublimate, we fortunately possess an antidote, which with regard to arsenic, is still a desideratum. Albumen and the gluten of wheat decompose corrosive sublimate. According to Peschier, the white of one egg is required to render four grains of the poison innocuous. "Albumen," says Dr. C. "is chiefly useful in the early stage of poisoning with corrosive sublimate, and is particularly called for when vomiting does not take place; but it further appears to be an excellent demulcent in the advanced stages." (P. 329.) In the case we have alluded to, p. 13, the white of egg was decidedly and immediately useful at the distance of an hour and a half after the swallowing of the poison. In this case some of the poison had probably already passed the pylorus, as salivation came on afterwards; but all the urgent symptoms were removed, nor did they recur. "When neither albumen nor gluten is at hand, milk is a convenient antidote of the same kind."

In mercurial salivation, it has been proposed by Dr. Finlay to check it by small doses of tartar emetic, frequently repeated, so as to act on the skin; and Mr. Daniell has recommended large doses of the acetate of lead as an effectual remedy for the same purpose. Dr. Christison has tried the former of these plans several times with apparent success. The chloruret of soda (as it has been called) has been recommended in gargle in salivation, we believe.

*Copper.* Natural verdigris (carbonate of copper) is insipid and quite insoluble, so that pure water left in vessels incrustated with it does not become poisonous. Artificial verdigris differs in composition according to the mode of manufacture. Foreign verdigris contains the neutral acetate, the subacetate, a little carbonate, oxide, and even metallic copper, along with particles of the fruit and fruit-

stalks of the grape. British verdigris consists chiefly of a mixture of the neutral acetate and subacetate, the former of which is soluble, and the latter insoluble in cold water. This difference enables the chemist to separate these substances from one another. If copper vessels be kept perfectly clean, they are not improper for culinary purposes. Some acid matters, however, though they do not dissolve clean copper by being merely boiled in it a few minutes, nevertheless, if allowed to cool and stand some time in it, will acquire a sensible impregnation. Dr. Christison has quoted an illustrative case from Wildberg. "A servant left some sour kroust for only a couple of hours in a copper pan which had lost the tinning. Her mistress and a daughter, who took the cabbage at dinner, died of twelve hours' illness; and Wildberg found the cabbage so strongly impregnated with copper, that it was detected by the test of metallic iron."

Vinegar dissolves metallic copper: and this depends on the cooperation of the atmospheric air held in solution by the fluid, and in contact with its surface; for, without such cooperation, the copper cannot be oxidated. Fatty matters and oils, particularly volatile oils, have the property of oxidating and uniting with copper.

"The symptoms caused by the soluble salts of copper in man are, in a general point of view, the same as those caused by arsenic and corrosive sublimate. According to the cases related by Orfila, the first symptom was violent headach, then vomiting and cutting pains in the bowels, and afterwards cramps in the legs and pains in the thighs. Sometimes, throughout the whole course of the symptoms, there is a peculiar coppery taste in the mouth, and singular aversion to the smell of copper. Drouard notices this in his thesis, and says that, having himself been once poisoned with verdigris, the smell of copper used for a long time after to excite nausea. Another symptom, which occasionally occurs in this kind of poisoning, and never, so far as I know, in poisoning with arsenic or corrosive sublimate, is jaundice. It likewise appears, when the case ends fatally, that convulsions and insensibility very generally precede death." (P. 349.)

A very small quantity of the sulphate of copper, says Dr. C., will prove fatal; for Drouard found that six grains killed a dog in half an hour. To this statement there are, however, exceptions. An old woman, addicted to intoxication, on being remonstrated with, swallowed a quantity of sulphate of copper, supposed to be about two drachms. She soon vomited. In an hour afterwards, when we saw her, she had severe pain in the stomach and head; but the vomiting continued, and the following day she was nearly

free from complaint. She had neither jaundice, convulsions, nor diarrhœa. Probably in M. Drouard's experiments the œsophagus was tied.

On this treatment in this variety of poisoning, it is proper to remark that sugar, which was formerly supposed to be an antidote, is not so; and that Orfila has found that albumen and ferro-cyanate of potass are the proper remedies. The former will doubtless be preferred, and should be given liberally, even after the urgent symptoms have disappeared.

We now pass on to the chapter on *Lead*, one of the most judicious and original in the volume; the subjects treated of in the intermediate pages not calling for any particular observation. Extending his researches beyond the limits of practical medicine and medical jurisprudence, our author has investigated the properties of lead in relation to medical police. We shall first speak of the tests of lead.

"In the fluid state, the acetate of lead, as well as all the soluble salts of lead, may be detected by the following system of reagents: Sulphuretted Hydrogen, Chromate of Potass, Hydriodate of Potass, and Metallic Zinc.

"1. *Sulphuretted hydrogen gas* causes a black precipitate, the sulphuret of lead. This is a test of extreme delicacy, and acts in whatever state of combination the lead exists, whether fluid or solid. It is preferable to the hydrosulphate of ammonia as a medico-legal test; for, as Fourcroy observed, the hydrosulphate of ammonia acts on many sound wines as if they contained lead, while the sulphuretted hydrogen never causes with them a black precipitate, unless they contain either lead or some other metallic impregnation. It must be remembered that many other metallic solutions yield a black precipitate with this test.

"2. *Chromate of potass*, both in a state of protochromate and bichromate, causes a fine gamboge-yellow precipitate, the chromate of lead. For the characteristic action of this reagent, it is desirable that the suspected liquid be neutral. It forms, with solutions of the sulphate of copper, a precipitate nearly of the same colour as the chromate of lead.

"2. *Hydriodate of potass* causes also a lively gamboge-yellow precipitate, the iodide of lead. The action of this test is impaired in delicacy by a considerable excess of nitric or acetic acid: these acids cause a yellow coloration with this test, although no lead be present.

"4. If the solution of lead is not too dilute, *a piece of zinc*, held for some time in it, displaces the lead, taking its place in the solution; and the lead is deposited in the form of a crystalline arborescence. This is a very characteristic and even delicate test. It acts also on the nitrate of lead." (P. 383.)

The value of the preceding tests is diminished or destroyed by the presence of animal or vegetable matters. The sulphuretted hydrogen undergoes the least alteration: this may be applied so as to detect lead in all possible states of mixture. But, before proceeding with this subject, Dr. Christison points out the various ways in which it is apt to be insidiously introduced into the body.

1. *Of the action of air and pure water on lead.* Lead is tarnished by exposure to air, by which the *carbonate* (not the oxide) is formed, and this is accelerated by the presence of moisture. Dr. Lambe, Guyton Morveau, and Dr. Thomson of Glasgow, have investigated the effects of water on lead. Dr. Christison has extended their researches, and, experimenting with his usual ingenuity and precision, has obtained the following results.

"The general result of these experiments appears to be, that neutral salts in various, and for the most part minute proportions, retard or prevent the corrosive action of water on lead, allowing the carbonate to deposit itself slowly, and to adhere with such firmness to the lead as not to be afterwards removable by moderate agitation; adding subsequently to this crust other insoluble salts of lead, the acids of which are derived from the neutral salts in solution, and thus at length forming a permanent and impermeable skreen, through which the action of the water cannot any longer be carried on." (P. 390.)

The presence of free carbonic acid, however, impairs the preservative power of the neutral salts.

*Of the action of natural waters on lead.* Rain or snow water collected at a distance from a town or buildings, is pure, and hence corrodes lead; but, collected in a town, its activity is much impaired, but still it will corrode. "Hence, perhaps, even in a town, but at all events certainly in the country, it would be wrong to use, for culinary purposes, rain or snow water which has run from lead roofs or spouts recently erected."

Spring waters have, *in general*, little or no action on lead, because they contain neutral salts. They do, however, sometimes corrode lead with rapidity, and thus lead to serious and fatal diseases. An instance of the kind is quoted from a paper by Dr. Wall, (Transactions of Lond. Coll. of Physicians, ii. 400.) The water in this instance Dr. Christison presumes must have contained either an unusually small proportion of salts, or a large proportion of carbonic acid. The Doctor illustrates "the danger of keeping the *same portion* of water for a length of time in leaden cisterns, if it has the power of acting on lead even

in a trifling degree;" and, although it has been stated that air is necessary to the formation of the carbonate, that air may exist in the water, and hence affect close pipes. Gmelin observes that the solvent power of water on leaden pipes is much increased if the pipes have a considerable fall; which Dr. Christison explains by saying that it is because the protecting crust can never fairly form before it is swept away.

*On the action of acidulous fluids on lead, and on its oxide.* Water which is acidulated with various acids acts on lead, with different degrees of rapidity. Carbonic acid partially counteracts the preservative effects of the neutral salts. The vegetable act on lead more vivaciously than the mineral acids (diluted); the acetic most strongly, then the citric, and then the tartaric. Hence the preparation or preservation of articles of food and drink in leaden vessels is fraught with danger; and in this way lead has often been insidiously introduced into the food of man. Milk has been rendered poisonous by being kept in leaden vessels. Rum has been supposed to be similarly affected, but this is somewhat doubtful. Wine has been accidentally impregnated in consequence of the bottles having been cleaned by means of shot, and some of the shot left behind. Cyder, from the presence of lead in the apparatus of the cyder houses; the action of vegetable acids on the glazing of earthenware, which contains an oxide of lead.

But many articles are designedly adulterated with lead for a variety of purposes; and among these the most common is the addition of litharge, to correct acescency in wines. "It is probable, however," says Dr. Christison, "that the adulteration of wine with lead can only be practised with success on the common tart kinds, such as those used by the lower orders on the continent:" for, in fact, it is only *when the acescency is due to the presence of acetic acid that lead is at all useful*. In France, it is a common practice to clarify honey and sugar of grapes, and to make brandy pale, by means of sugar of lead; and M. Boudet has detected lead in many samples of these articles as sold in Paris. Cheese has been intentionally adulterated with red lead, in order to communicate the peculiar reddish-yellow colour which is supposed to be characteristic of fineness of quality.

The process for detecting lead in mixed fluids, is next described.

"The symptoms observed in man from the preparations of lead are of three kinds. One class of symptoms indicates inflammation

of the alimentary canal; another, spasm of its muscles; and a third, injury of the nervous system, sometimes apoplexy, more commonly palsy, and that almost always partial and incomplete. Each of these classes of symptoms may exist independently of the other two; but the two last are more commonly combined." (P. 412.)

The morbid appearances caused by poisoning with lead are in some respects peculiar. The valuable work of Mérat contains an account of four inspections after death from the acute or comatose form of Colica Pictonum. The bodies were plump, muscular, and fat. The alimentary canal was quite empty, and the colon was much contracted, in one to an extraordinary degree. The mucous coat of the alimentary canal was everywhere healthy. No morbid appearance was visible within the head. The appearances in those who have been long affected with the paralytic form of colica pictonum have been rarely observed. Dr. Duncan supplied to Dr. Christison the only good account he has been able to procure of the inspection of the intestinal canal in such a case. The man, who was a plumber, had been long and frequently afflicted with colica pictonum and its sequelæ. The intestines were dark, tender, and far advanced in putrefaction; the cardiac orifice of the stomach was so narrow that it would only allow a goose-quill to pass; the mesenteric glands were enlarged and hardened; the thoracic duct was surrounded by many large bodies like diseased glands, exactly of the colour of lead, and composed of organised cysts, containing apparently an inorganic matter. The muscles in similar circumstances are much diseased. When the paralysis is not of long standing, it appears, from the experiments of Schloepfer, (whose animals survived about three weeks,) that the whole muscular system becomes pale, bloodless, and flaccid. When the palsy is of long standing, this change increases so much that the muscles in some parts, as in the arms and thumbs, acquire the colour and general aspect of white fibrous tissue.

"In the irritant form of poisoning, a safe and effectual antidote exists in any of the soluble alkaline or earthy sulphates. If none of these is at hand, then the alkaline carbonates, or the bicarbonates,\* which are not so irritating as the carbonates. The phosphate of soda is also an excellent antidote. If the patient does not vomit, it will be right also to give an emetic of the sulphate of zinc." (P. 425.)

\* We cannot help doubting the propriety of employing the alkaline carbonates in cases of poisoning with the soluble salts of lead.

In the treatment of colica pictonum in its primary stage, every body knows that the conjunction of purgatives and anodynes is the most successful; and mercury to ptyalism has been found useful. In the advanced periods of the disease, when palsy is the chief symptom, the abandonment of the trade, with attention to diet and exercise in the open air, and the use of splints to the hand and forearm, as recommended by Dr. Pemberton, are the appropriate means.

The prophylactic measures are as important as the curative, and of these the essential are strict personal cleanliness; the working clothes should be made not of woollen, but of strong compact linen, which should be changed and washed at least once a week. While at work, a cap of some light impervious material should always be worn. Food should never be taken in the shop, nor before washing, and breakfast should be taken before commencing work in the morning. Constipation should be provided against, and the first indication of derangement of the digestive organs treated with attention. Their diet should be nutritive; and there is some reason for believing that the free use of fat and fatty articles of food is a preservative. The workshops should be spacious, and both thoroughly and systematically ventilated, so as to carry off the floating particles in certain invariable and known courses. The chimneys of smelting furnaces should be high, so as to increase the draught. In white-lead manufactories, the pulverizing has been long performed under water; and at Porto Bello the preparatory process of rolling is also performed entirely under water, or with damping; and, in packing the white lead, the floors are there kept constantly damp; and from these precautions, and great attention to personal cleanliness, the workmen in that manufactory enjoy an immunity from disease unknown in other establishments. (P. 430.)

*Vegetable Acrids.* According to Orfila's experiments, scammony is much less active than jalap. Four drachms of the concrete juice of the root given to a dog produced only diarrhoea, whilst thirty-six grains of the resin of jalap was fatal to a dog in four days. (See experiments of M. Cadet de Gassicourt; Orfila's *Toxicol. générale*, i. 686.)

Savine, although employed with safety and advantage to promote the secretion of pus from blistered surfaces, cannot be applied to a fresh wound without exciting diffuse inflammation. On the effects of oil of savine, Dr. Christison makes the following remarks:



"There is no doubt that, if given in such quantity as to cause violent purging, abortion may ensue; but unless there is naturally a predisposition to miscarriage, the constitutional injury and intestinal irritation required to induce it are so great as to be always attended with great danger, independent of the uterine disorder. In a charge of wilful abortion, the very possession of oil of savine would be a suspicious circumstance, because the notion that it has the power of causing miscarriage is very general and familiar with the vulgar; while, so far as I know, it is not employed for any useful purpose whatever." (P. 453.)

*Animal Acrids.* Cantharides have never been used for the purpose of committing murder; but, on account of its powerful effect on the organs of generation, they have often been given by way of joke, and sometimes for the purpose of procuring abortion. Fatal accidents have been the consequence. Orfila has examined with care the various principles procured by M. Robiquet during his analysis; and it appears to result that the active properties of the fly reside partly in the crystalline principle, and partly in a volatile oil, which is the source of its nauseous odour. The following abstract of a case by M. Biett, of Paris, gives a rational and unexaggerated account of the symptoms produced by cantharides, as they commonly appear. A young man, in consequence of a trick of his companions, took one drachm of the powder: soon afterwards he was seized with a sense of burning in the throat and stomach, and in about an hour with violent pain in the lower belly. When M. Biett saw him, his voice was feeble, breathing laborious, and pulse contracted; and he had excessive thirst, but could not swallow any liquid without unutterable anguish. He was likewise affected with priapism. The pain then became more extensive and severe; tenesmus and strangury were added to the symptoms, and, after violent efforts, he succeeded in passing by the anus and urethra only a few drops of blood. By the use of oily injections into the anus and bladder, together with a variety of other remedies intended to allay the general irritation of the mucous membranes, he was considerably relieved before the second day; but even then he continued to complain of great heat along the whole course of the alimentary canal, occasional priapism, and difficult micturition. For some months he laboured under difficulty of swallowing. (P. 456.)

In a fatal case related in the *Gazette de Santé*, the brain was found gorged with blood. The omentum, peritoneum, gullet, stomach, intestines, kidneys, ureters, and internal

parts of generation, were inflamed; and the mouth and tongue were stripped of the lining membrane.

No antidote has yet been discovered for this poison. Fixed oil, so far from being a remedy, is probably injurious. Oleaginous and demulcent injections into the bladder generally relieve the strangury. The warm bath is an useful auxiliary. Leeches and bloodletting are required according to the degree and stage of inflammation.

Of the species of *Fish* which act deleteriously, either always or in particular circumstances, the muscle is the best known on our coasts. The subject, however, of fish-poison is veiled in great obscurity. Nothing satisfactory has been ascertained as to the signs by which the unwholesomeness in muscles may be ascertained, nor as to its causes. The effects differ in different cases; sometimes they produce symptoms of local irritation only: thus Foderé mentions the case of a sailor at Marseilles, who, in consequence of eating a large dish of them, died in two days, after suffering from vomiting, nausea, pain in the stomach, tenesmus, and quick contracted pulse. The stomach and intestines were found, after death, red and lined with an abundant tough mucus. One of the cases described by Dr. Combe, which however, terminated favorably, is of the same nature. This patient had severe stomach symptoms from the commencement, attended with cramps, and ending in peritonitis, which required the use of the lancet.

But much more frequently the local effects have been trifling, and the prominent symptoms have been almost entirely indirect, and chiefly nervous. Two affections of this kind have been noticed: one is an eruptive disease resembling nettlerash, and accompanied with violent asthma; the other a comatose or paralytic disorder, of a very peculiar description. The former affection has been relieved by ether.

The following summary from Dr. Combe's paper, (Ed. Med. and Surg. Journal, xxix. 88,) gives a correct view of the general phenomena:

"None, so far as I know, complained of any thing peculiar in the smell or taste of the muscles, and none suffered immediately after taking them. In general, an hour or two elapsed, sometimes more; and then the bad effects consisted rather in uneasy feelings and debility than in any distress referrible to the stomach. Some children suffered from eating only two or three; and Robertson, a young and healthy man, only took five or six. In two or three hours they complained of a slight tension of the stomach. One or two had cardialgia, nausea, and vomiting, but these were not general or lasting symptoms. They then complained of a prickly

feeling in their hands; heat and constriction of the mouth and throat; difficulty of swallowing and speaking freely; numbness about the mouth, gradually extending to the arms, with great debility of the limbs. The degree of muscular debility varied a good deal, but was a constant symptom. In some, it merely prevented them from walking firmly. While lying in bed, they could move their limbs with tolerable freedom; but, on being raised to the perpendicular posture, they felt their limbs sink under them. Some complained of a bad coppery taste in the mouth, but in general this was an answer to what lawyers call a leading question. There was slight pain of the abdomen, increased on pressure, particularly in the region of the bladder, which suffered variously in its functions. In some the secretion of urine was suspended, in others it was free, but passed with pain and great effort. The action of the heart was feeble, the breathing unaffected; the face pale, expressive of much anxiety; the surface rather cold; the mental faculties unimpaired."

Of the two fatal cases, Dr. Combe says,

"The woman went away as in a gentle sleep, and that, a few minutes before death, she had spoken and swallowed. She died in three hours. The other fatal case was that of a dockyard watchman, who was found dead in his box six or seven hours after he ate the muscles." (P. 465.)

*Venomous Snakes.* A patient of M. Piorry, two hours after being bitten by a viper, had all the constitutional symptoms strongly developed; such as slow, very feeble pulse, nausea, vomiting, and swelling of the face. When a cupping glass was applied for half an hour, the general symptoms ceased, and did not return. Next day diffuse inflammation began, but it was checked by leeches. (P. 472.)

*Of poisoning by diseased and decayed animal matter.* This chapter includes the interesting and important subject of wounds received in dissection. Of the nature of the poison thus introduced nothing is known. It is probable that the developement of ammonia by the process of putrefaction destroys it. It acts like many other animal poisons, sometimes by depressing the vital powers, with little or no inflammation, and requiring a stimulant mode of treatment; sometimes by exciting diffuse inflammation; and occasionally by acting in both ways. Mr. Brodie's paper, in the 57th volume of this Journal; Dr. Duncan's cases, in the Edinburgh Medico-Chir. Transactions, vol. i.; and Mr. Travers' work on Constitutional Irritation, and the masterly review of the latter work in the Edinburgh Med. and Surg. Journal, (xxvi. 340,) contain the most accurate and satisfactory information on the nature and treatment of these cases.

*On the effects of animal matter rendered poisonous by common putrefaction.* Professor Christison remarks, "that, probably in peculiar circumstances, decaying animal matter may excite epidemic fevers:" and this opinion is founded on the researches of MM. Gaspard and Magendie, Leuret and Hamont, and Orfila.\* Of animal matter rendered poisonous by modified putrefaction, cheese, bacon, and the German sausage, are the best known examples. "But, from information communicated to me not long ago by Dr. Swanwick," says Dr. C., "an intelligent practitioner of Cheshire, there is some reason to think that a parallel poison is occasionally met with in that country, among the small hill-farms, where the limited extent of the dairies obliges the farmer to keep the curd for several days before a sufficient quantity is accumulated for the larger cheeses." (P. 481.) The symptoms produced by poisonous cheese and sausages are such as result from various degrees of gastro-enteric and gastro-pulmonic inflammations, and subsequently paralysis of the respiratory muscles. The abstract of the prize essay of Dr. Horn, of Berlin, which appeared in the January number of the Edinburgh Med. and Surg. Journal, contained the fullest details on the effects and nature of the sausage-poison presented to British toxicologists; and if Dr. Horn has not succeeded in insulating the poisonous principle, he has shown that the acid of fat is not the *venenum farcinurale*, and that the experiments of Kerner, Westrumb, and Hünefeld are fallacious. The facts stated by him are inconsistent also with the opinion of Dunn, that this poison is the result of putrefaction: at least, in sausages known to be poisonous no sign of putrefaction was perceptible. In vol. 46 of this Journal, an account is given of the work of Kerner on the Sausage poison.

Dr. Christison has introduced into his work a chapter on poisoning by *Mechanical Irritants*, not because such substances have, properly speaking, any poisonous quality, but occasion symptoms, by their mechanical qualities, like those of poisoning; and hence, in a medico-legal work on Poisoning, ought not to be passed over.

The most important are those which cause injury by reason of their roughness, sharpness, or size. The 35th vol. of this Journal may be referred to for an excellent account of the ordinary phenomena in such accidents.

\* Journal de Physiol. ii. iii. and vi., and Toxicol. Générale.

Pounded glass is in general certainly not poisonous;\* but Mr. Hebb, of Worcester, has related a case (Midland Med. and Surg. Reporter, i. 47,) in which the death of the child resulted probably from this substance inducing gastritis. In another case, described by Portal, he made the patient eat largely of cabbage to envelope the particles of glass, and then gave him an emetic.

The effects of the deglutition of boiling water have been illustrated by an interesting paper of Dr. Marshall Hall, (Med. Chir. Trans. xii.) from which it appears that the disease is cynanche laryngea, terminating fatally by suffocation.

II. Proceeding to the second class, or Narcotic Poisons, we have three important chapters, on opium, hydrocyanic acid, and the poisonous gases.

*Opium*, one of the most important and familiar poisons known, has been frequently used for the purpose of suicide, for the commission of murder, or to induce stupor previous to the perpetration of crimes; and in the practice of medicine has often been the cause of fatal accident.

Passing over the tests of opium, to which subject Prof. C. has added much interesting and original information, and also the physiological and therapeutic effects of moderate doses of opium, and the symptoms of poisoning by opium in man, we proceed to the

*Treatment of poisoning with opium.* The primary object is to remove the poison from the stomach, either by emetics administered in the usual way, by the stomach pump, or by injection of emetics into the veins. By far the best emetic is the sulphate of zinc, in the dose of half a drachm or two scruples, which may be repeated after a short interval, if the first dose fails to act; but, as the poison becomes intimately mixed with the lining mucus of the villous coat, and is never thoroughly removed till the mucus is also removed, the stomach pump appears the preferable mode of emptying the stomach, from the greater facility and certainty with which the mucus may thus be removed.

"The next object in conducting the treatment of poisoning with opium, is to keep the patient constantly roused. This alone is sufficient, when the dose is not very large, and the poison has been discharged by vomiting; and in every case it forms, next to the evacuation of the stomach, the most important part of the treatment." (P. 546.)

This rousing should be effected by constant exercise be-

\* For the most satisfactory proof of this, we refer to the experiments of CALDANI and MANDRUZZATTO, in *Saggi Scientifici e Letterari dell' Accademia di Padova*.

tween two men, which should be continued three, six, or twelve hours, or till the stupor is removed. Dashing cold water over the head and breast has been advantageously used, (vide vol. 48, p. 225, of this Journal,) in producing consciousness, and it appears also to be an excellent way to ensure the operation of emetics. Stimulants, such as ammonia, camphor, musk, assafetida, &c., have been in some cases used with advantage. Venesection has been sometimes successfully employed: it ought not to be practised till the stomach has been emptied: after that has been done, if the patient be readily roused, bleeding is not necessary; but, if there be difficulty in producing consciousness, the stomach having been emptied, bleeding will in such circumstances be an appropriate remedy. Artificial respiration is a last resource, and in a few instances has been successfully employed.

"After the breathing has been almost or entirely suspended, the heart continues to beat for some time, and, so long as its contractions continue, there is some hope that life may be preserved. Artificial respiration, we conceive, presents a chance of success in cases where death, if it ensue, will result from paralysis of the respiratory muscles, and where the poison may pass off through the function of respiration.

"There is no useful antidote for opium. Decoction of galls Orfila has found renders it somewhat less active, but his experiments do not assign to it any considerable power. It has been recently stated by Dr. Donné, that iodine, chlorine, and bromiac, are all antidotes for poisoning with vegetable alkaloids, forming compounds with them which are not deleterious. But the delay of ten minutes in the administration of the antidote rendered it useless; and it remains to be proved that the same advantages will be derived from the administration of these antidotes in the instance of poisoning with the crude drug, as with the alkaloids." (P. 663.)

After the opium has been completely removed, the vegetable acids and infusion of coffee have been found useful in reviving the patient, and subsequently in subduing sickness, vomiting, and headach.

*Of poisoning with Hydrocyanic Acid.* This poison is more rapid in its action and more fatal in a minute dose than any other known poison. It is either formed artificially by chemical process, or exists naturally in the leaves, bark, and fruit-kernels of certain plants. The pure acid is liquid, limpid, and colourless. When diffused through the air, the odour has a distant resemblance to that of bitter almonds. It is not the same. It boils at eighty degrees, and freezes at five; it is very inflammable; it decomposes spontaneously, and becomes brown sometimes in an hour,

and commonly within twelve hours, unless it is kept very cold. Hence it is very improbable that a case will ever happen in which the medical jurist will have to examine it in its concentrated form. In combination with water, it forms the acid kept in the shops.

The tests for hydrocyanic acid are, its odour, the salts of copper, the salts of the protoxide of iron, and the nitrate of silver. The peculiar odour is a very characteristic and delicate test of its presence.

*Process for mixed fluids.* Dr. Christison commends the process of Lassaigne and Leuret by distillation, which is as follows: The contents (of the stomach), after filtration, are to be neutralized with sulphuric acid, if they are alkaline, in order to fix the ammonia which may have been disengaged by putrefaction; the product is then to be distilled from a vapour bath, till an eighth part has passed over into the receiver, and the distilled fluid is to be tested with the protosulphate of iron in the usual way. Schabarth has objected that the acid may be formed by this process from the decomposition of animal matter. Dr. Christison doubts the soundness of the objection.

*Of the symptoms produced by hydrocyanic acid in man.* Coullon has given a good account of the effects of small doses, as ascertained by experiment on himself. When he took from twenty to eighty-six drops of the diluted acid, he was attacked for a few minutes with nausea, salivation, hurried pulse, weight and pain in the head, succeeded by a feeling of anxiety, which lasted about six hours. Such symptoms are apt to be induced by too large medicinal doses. Another remarkable symptom, which has been sometimes noticed during its medicinal use, is salivation with ulceration of the mouth. Dr. Macleod thrice had occasion to remark this in patients who had been using the drug for about a fortnight, and twice in one individual; and Dr. Granville says he had also twice witnessed the same effect. (P. 563.)

“The most complete account of the symptoms from fatal doses when convulsions occur, is given in a case reported by Hufeland, of a man who, when apprehended for theft, swallowed one ounce of alcoholized acid, containing about forty grains of the pure acid. He was observed immediately to stagger a few steps, and then to sink down without a groan, apparently lifeless. A physician, who instantly saw him, found the pulse gone, and the breathing for some time imperceptible. After a short interval, he made so forcible an expiration that the ribs seemed drawn almost to the spine. The legs and arms then became cold, the eyes prominent, glistening, and quite insensible: after one or two more convulsive expirations, he died, five minutes after swallowing the poison.” (564.)

From the observations and experiments recorded, "it is probable that very large doses occasion death in a few seconds; and, at all events, a few minutes will suffice to extinguish life when the dose is considerable; but, if the individual survive thirty or forty minutes, he will very generally recover."

The period within which it begins to operate, is an important question in medical jurisprudence, and the fate of the prisoner on a late trial at Leicester depended on the solution of it. This must depend on the strength of the acid employed. Mr. Macauley, of Leicester, in three experiments, found "that one dog was killed with four drachms in eight seconds; another with four drachms in seven seconds; and another with four and a half drachms in three seconds." We presume the medicinal acid was experimented with.

The proper *treatment* of this form of poisoning is now pretty generally known. "On the whole it appears," says Dr. C. "that the proper treatment of a case of poisoning with hydrocyanic acid consists in the use of the cold affusion, and the inhalation of diluted ammonia or chlorine; and, as chlorine will hardly ever be at hand, ammonia will commonly be employed. Venesection is also probably indicated by the signs of congestion in the head." This is a form of poisoning in which we presume that artificial respiration might be had recourse in desperate circumstances, with a chance of success.

The plants which contain hydrocyanic acid, and whose poisonous qualities depend most probably on its presence, belong to the division *Pomaceæ* of Jussieu's natural family, the *Rosaceæ*. Those which have been most closely examined are the bitter almond, cherry laurel, bird cherry, and peach. The odour which distinguishes these plants is not owing to hydrocyanic acid, for it is equally strong after the acid is thrown down. According to the experiments of Vogel, the volatile oil contains a poisonous principle, independent of the hydrocyanic acid; but we cannot help distrusting the correctness of this opinion.

#### *On the Poisonous Gases.*

"The subject of the poisonous gases is one of great importance in relation to medical police, as well as medical jurisprudence. They are objects of interest to the medical jurist, because their effects may be, and have been, mistaken for those of criminal violence, and because they have been resorted to for committing suicide. They are interesting as a topic of medical police, since some trades expose workmen to their influence." (P. 583.)



Some gases act negatively on the animal system, by preventing the access of respirable air to the lungs; others are positively poisonous. Nysten\* has arranged them according to the results of his experiments on animals, but their effects on man have not been found quite analogous. According to the latter principle, Dr. Christison arranges them into two groups, the irritants and the narcotics. Of the former are nitric oxide gas, nitrous acid vapour, muriatic acid gas, chlorine, ammonia, sulphurous acid, and some others of little consequence.

Under the head of chlorine, Dr. C. remarks "the interesting fact that, during the epidemic fever which raged over Ireland from 1816 to 1819, the people of the manufactory at Belfast were exempt from it." (P. 588.)

The narcotic gases are of much greater importance than the irritants, on account of the singularity of their effects, and the greater frequency of accidents with them. This group includes sulphuretted hydrogen, carburetted hydrogen, carbonic acid, carbonic oxide, nitrous acid, and cyanogen. Dr. Christison has made some interesting extracts from the works of Hallé, (*Recherches sur la Nature du Mephitisme des Fosses d'Aisance*, 1785,) showing the dangerous accidents arising from the gases of privies, accidents almost peculiar to France from the construction of the fosses; and then notices the fatal cases of cholera (?) which occurred at a school at Clapham last year, and which were attributed to sulphuretted hydrogen from a foul cess-pool, the contents of which had been spread over a garden adjoining to the children's playground. Dr. Christison doubts the accuracy of the opinion, and regrets the want of fuller details of the inquiry instituted at the period of the fatal occurrence.

But, of all the deleterious gases, carbonic acid has been the most fruitful source of fatal accidents. Physiologists have doubted whether it is a positive poison, or simply an asphyxiating gas. The facts adduced by Dr. Christison satisfactorily establish the former opinion.

An attempt to inhale pure carbonic acid gas irritates the nostrils and throat so strongly, that the glottis closes, and inspiration becomes impossible. Hence death in this way is purely from suffocation. The effects are very different when the gas is considerably diluted; the symptoms then resemble apoplexy: but these effects differ somewhat according to the source from which the gas is derived, and the

\* *Recherches Chimico-Physiologiques.*

admixtures consequently breathed along with it. Dr. Christison has therefore quoted an example of the effects of the pure gas diluted with air, of the emanations from burning charcoal, tallow, and coal; and, finally, of air vitiated by the breath.

1. "M. Chomel, of Paris, has related a case of poisoning with the gas diluted with air, occurring in the person of a labourer, who was suddenly immersed in it at the bottom of a well, and remained there three quarters of an hour. He was first affected with violent and irregular convulsions of the whole body, and perfect insensibility, afterwards with fits of spasm, like tetanus; and during the second day, when these symptoms had gone off, he continued to be affected with numbness. It is worthy of remark, that, contrary to general belief, these effects may be produced in situations where the air is not sufficiently impure to extinguish lights."

2. Dr. Christison, after giving an abstract of a case by Dr. Babington, (*Med. Chir. Trans.* i. 83,) of the effects of the fumes of burning charcoal, thus proceeds: "Occasionally the stage of stupor is followed, as in some other varieties of narcotic poisoning, by a stage of delirium, at times of the furious kind, or by a state resembling somnambulism. It does not follow that recovery is certain, because coma has thus given place to delirium." Buchner has related a case which terminated fatally at the end of five days. (P. 688.)

According to the researches of Orfila, the emanations from burning charcoal, when in a state of vivid ignition, consist of carbonic acid gas, as the only foreign ingredient; but, when charcoal burns faintly, fourteen per cent. of carburetted hydrogen may be discovered, and it appears that the vapours are most dangerous in the latter state.

3. The gases produced by the slow combustion of tallow, &c. will produce dangerous symptoms.

"An instance has been recorded in which they proved fatal. A party of iron smiths, who were carousing on a festival day at Leipzig, amused themselves with plaguing a boy, who was asleep in a corner of the room, by holding under his nose the smoke of a candle just extinguished. At first he was roused a little each time; but, when the amusement had been continued for half an hour, he began to breathe laboriously, was then attacked with incessant epileptic convulsions, and died on the third day."

4. "The vapours from burning coal are the most noxious of all kinds of emanations from fuel, and cause peculiar symptoms; but they are less apt to lead to accidents than the vapour of charcoal, as they are much more irritating to the lungs. This effect depends on the sulphurous acid gas which is mingled with the carbonic acid." (P. 600.)

In an accident which happened at Leadhills, in March 1817, from these vapours, four men lost their lives. Of those who recovered, some, when Mr. Braid first saw them, were running about frantic and furious, and striking all who came in their way; some ran off terrified whenever any one approached them; some were singing, some praying, and others lay listless and insensible. Many of them retched and vomited; in some the pulse was quick, in others slow, in many irregular, and in all feeble. All who could describe their complaints had violent headach, some of them tenesmus, and a few diarrhœa. In a few days all recovered except the first four, and three others who had descended to the deeper parts of the mine." (P. 601.) Somewhat analogous to the symptoms now described are the effects of the gradual contamination of air in a confined apartment.

"The treatment of poisoning with carbonic acid consists chiefly in the occasional employment of the cold affusion, and in moderate bloodletting, either from the arm or from the head. In a late case which happened at Paris, where a lady tried to make away with herself by breathing charcoal fumes, and was found in a state of almost hopeless insensibility, various measures were tried unsuccessfully, till cupping from the nape of the neck was resorted to, and she then rapidly recovered." (P. 603)

Inflating the lungs with oxygen has been found useful in poisoning with carbonic oxide.

III. *On the Narcotico-Acid Poisons.* Orfila has divided them into six groups. The first of these comprehends the poisons whose principal symptom is delirium. The deadly nightshade, thorn apple, and tobacco, alone have been particularly examined: they all contain alkalis, to which their virtues are attributable.

"When the extract of Belladonna is rubbed on the skin, vision is not impaired;\* though, when it is taken internally, so as to affect the pupils, the sight is commonly much obscured. . . From the cases that have been published, the leading symptoms appear, in the first instance, to be dryness in the throat, then delirium with dilated pupils, and afterwards coma. Convulsions are rare, and when present, slight."

The cases of poisoning which have happened in this country from the *Datura Stramonium*, have been all accidental; but in Germany, according to a remark which occurs in Gmelin's *History of Vegetable Poisons*, it has been a good deal employed to produce loss of consciousness and lethargy, preparatory to the commission of various

\* Vision is often impaired for some time after the external application of belladonna on the face.—En.

atrocious crimes; some of which Gmelin has detailed with edifying particularity. The symptoms in man do not differ essentially from those produced by belladonna.

Emetics and purgatives are the obvious remedies for the poisons just mentioned, and venesection when the determination to the cerebro-spinal system is considerable or continued. The treatment of the poisonous effects of tobacco must be modified, according as the heart or brain is chiefly affected. It appears, from the researches of Parent, Duchatelet, and D'Arcet, that the workmen employed in the tobacco manufactories are as healthy, and live as long, on an average, as other tradesmen.

Passing over the consideration of the poisonous plants of the natural orders *Umbelliferae* and *Ranunculaceae*, which present nothing of importance to detain us, we come to the *Digitalis Purpurea*.

A patient of Dr. Blackall died from the effects of two drachms of the infusion taken daily, but for how many days is not stated. Another fatal case is quoted from six ounces of a strong decoction; and Dr. Christison concludes his account by observing that "the preparations of foxglove are very uncertain in strength. From what I have observed in the course of their medicinal employment, I conceive few powders retain the active properties of the leaves, and even not many tinctures." Our experience of these preparations of foxglove agrees entirely with what is stated by Dr. Christison. We are, however, perfectly satisfied that the Pharmacopœia does not contain a more certain, safe, and efficient medicine than the infusion of the leaves of this plant, when cautiously administered. We have often witnessed its signal benefits in subacute, idiopathic inflammations of the mucous membrane of the lungs, trachea, and larynx; in similar states of disease of the membranes of the brain; in acute rheumatism after early bleeding; in puerperal mania, and other affections. The dose in which we have given it has been half an ounce of the infusion (to an adult) every six or eight hours, watching its effects most closely, and suspending the medicine as soon as sickness or intermission of the pulse occurred. After full experience of the medicine in this way, we can say that we never saw any unfavorable effect produced by it, while its power in arresting certain inflammatory affections appeared to us greater than any other remedy, bleeding excepted.

The therapeutic action of this drug is manifestly owing to its direct action on the heart and arteries, extending to

their minutest ramifications. When the medicine is given in smaller doses, and consequently continued during several days before the depressing effect on the heart be produced, the serious consequences of its accumulation in the system may be almost uniformly expected. In the case of a young lady who continued the infusion in the dose of two drachms two or three times a day for several days, alarming symptoms of depression came on, and at the end of six weeks the pulse was slower than natural, and irregular. She entirely recovered, however, and in a few months enjoyed robust health.

The second group of narcotico-acrids consists of those substances which induce violent spasms like tetanus, without impairing sensibility, and prove fatal, for the most part, by suspending respiration. Their poisonous properties are owing to the alkaloids strychnia and brucea, which these plants (the various species of *Strychnos* and the *Brucea antidysenterica*) contain.

Except the hydrocyanic acid and some of the poisonous gases, no substance is endowed with such rapid and destructive energy as the strychnia. The effects have been apparent in fifteen seconds, when the substance has been introduced into the cavity of the pleura. *Nux vomica*, the most familiar species of the strychnos, has been the most ordinary source of the fatal effects of strychnia. "With regard to the dose requisite to prove fatal, the smallest fatal dose of the alcoholic extract yet recorded is three grains." "Hoffmann mentions a fatal case caused by two fifteen-grain doses of the powder; and in Hufeland's Journal there is another, caused by two drachms, which was fatal in two hours." Between two and three drachms of the powder proved fatal in one hour, in a case related by M. Ollier.

Little is known of the treatment in this kind of poisoning. The immediate employment of the stomach-pump or emetics is indispensable. "When *nux vomica* has been taken in powder, which is the most frequent form in which it has been used, it adheres with great obstinacy to the inside of the stomach. Consequently, whatever means are employed for evacuating the stomach must be continued assiduously for a considerable time. If the patient is not attacked with spasms in two hours, he will generally be safe." (P. 643.) As we have already stated when speaking of morphia, M. Donné believes that iodine, bromine, and chlorine, are antidotes for the alkaloids, and among others for the alkaloid of *nux vomica*. It is necessary, however,

to administer the remedy within ten minutes of the alkaloid; and it has not been ascertained that these antidotes are such to the crude drug.

The symptoms induced by the false *Angustura* bark are almost the same as those caused by *nux vomica*. The therapeutic effects of the alkaloid *Brucia*, as well as *Strychnia*, have been illustrated by the valuable Hospital Reports of Dr. Bardsley, a review of which has been recently given in this Journal.

We cannot condense the account of the fourth group, the *poisonous Fungi*, which is, as usual, very judicious. One of the best examples of poisoning from this source will be found detailed in vol. 36 of this Journal. Dr. Christison has given additional instances from other sources, and has added an interesting case from Platner, where a girl poisoned her mistress by mixing oxide of arsenic with a dish of mushrooms. The fatal event was at the time attributed to the mushrooms, but the girl subsequently acknowledged the true cause of it.

"The different sorts of grain are subject to certain diseases, in consequence of which, meal or flour made from them is apt to be impregnated with substances more or less injurious to animal life. It is likewise believed that unripe grain possesses properties which render it, to a certain extent, unfit for the food of man." (P. 663.)

The *Secale Cornutum*, or spurred rye, is the most important of the poisons here adverted to. Various causes have been assigned for the production of the spur in rye; and of these, extreme moisture, the growth of a parasitical fungus, a species of scleroticum, according to Decandolle, or puncture by an insect, are the most probable. In confirmation of the latter cause, General Martin Field found that puncturing the glumes of the rye with a needle produced the spur.

A single large dose of the spurred rye (two drachms, for instance) produces effects analogous to the irritant poisons; but, introduced into the system insidiously, as when taken for some time in rye bread, it occasions, sometimes, a nervous disorder, characterised by violent spasmodic convulsions; at others, a cachectic state of the constitution, terminating in dry gangrene. It does not appear that these two affections are blended together in the same case. The facts presented by Dr. Christison have been chiefly derived from an elaborate essay on the subject by M. Robert, in vol. 25 of *Rust's Magazine*. As to the medical qualities of the *secale cornutum*, Dr. C. observes it is the opinion of the best authorities "that it is endowed with the pro-

perty only of accelerating natural labour, not of inducing it, particularly in the early months of pregnancy." In the fourth Number of the Glasgow Medical Journal, Dr. Macfarlane has given a case in which the ergot appeared to promote the expulsion of the polypus. One drachm was infused in four ounces of water, and one ounce given every two hours. The whole was given before the effect was produced. In the course of a few hours, the tumor was discovered to be in the vagina; four days after the exhibition of the ergot, the polypus fell off. A paper by Dr. Young, in vol. iii. of the Edinb. Med. Chir. Transactions, contains some pretty satisfactory evidence of the power of the spurred rye in accelerating natural labour.

The *Lolium Temulentum*, or darnel grass, is the only poisonous species of the natural order of the grasses. In the 28th volume of this Journal may be found the particulars of some cases of poisoning supposed to be occasioned by the accidental mixture of the lolium with oatmeal. Eighty inmates of the poor-house at Sheffield were attacked with similar symptoms after breakfasting on oatmeal porridge. The chief symptoms were a piercing stare, violent agitation of the limbs, quivering of the lips, frontal headache, confusion of sight, dilated pupil, small tremulous pulse, twitchings of the muscles, and palpitation. In twelve hours all the persons attacked were well but two, who had strong convulsions in the subsequent night, but also eventually recovered.

The chapter on poisoning with *Alcohol* and *Ether* concludes the work, with the exception of the Appendix

Alcohol or spirituous liquors may prove fatal in the way of coma, or more frequently from a previous excited state of the circulation, causing true apoplexy in a predisposed habit; or still more frequently from the occurrence of some trifling accident, which in his torpid state the individual cannot avoid or remedy, such as exposure to cold, falling with the face in mud or water, suffocation from matters of vomiting getting into the windpipe, &c.

Dr. Alison communicated to Dr. Christison the particulars of a case where death took place from simple intoxication, twenty minutes after the state of lethargy began. On examining the body, Dr. Alison could not discover any morbid appearance, except some watery effusion on the surface of the brain and in the ventricles; but the contents of the stomach had a strong smell of spirits.

When swallowed in large quantity, coma may come on in a few minutes, and become profound as in apoplexy.

"The face is then sometimes livid, more generally ghastly pale; the breathing stertorous, and of a spirituous odour; the pupils sometimes much contracted, more commonly dilated and insensible; and, if relief is not speedily procured, death takes place, generally in a few hours, and sometimes immediately." (P. 678.) Professor Bernt, of Vienna, has quoted four cases, and Dr. Cooke another, where extravasation of blood resulted from poisoning with spirits: it is not, however, an usual result; congestion is far more common. Extravasation is not apt to occur in cases of rapid death, brought on by a very large quantity swallowed at once. The circulation, indeed, in such cases, is in a state quite the reverse of excitement, and accordingly the brain and its membranes are found quite healthy. Dr. Christison is sceptical as to the presence of spirits in the ventricles of the brain, as reported by a few authors. In the well-known case related by Dr. Cooke, it was stated that the liquid was inflammable. "It would have been desirable," says Dr. C. "that Dr. Cooke, or rather his informer, Sir A. Carlisle, had mentioned how the inflammability was proved; for some fallacy may be strongly suspected, because gin of sufficient strength to take fire could not enter the blood-vessels without coagulating the blood, and so preventing its further progress."

Sulphuric Ether is a poison of the same nature as alcohol. "A gentleman, in consequence of inhaling it too long, was attacked with intermitting lethargy for thirty-six hours, depression of spirits, and lowness of pulse." (*Journal of Science*, iv. 158.)

We here terminate our lengthened analysis of this valuable publication, and if any apology be required for the extended commentary which we now present, the importance of the subjects treated of will readily supply it. To add any thing further to the commendation we passed on the work at the conclusion of our former review would be superfluous, and we have nothing to retract or to modify. Dr. Christison will hereafter be ranked with those illustrious writers on medical jurisprudence, Foderè, Chaussier, and Orfila, who, by their learning, research, and cultivated judgment, have vindicated the claims of that science, which it was the object of their labours to illustrate and extend.



*A Catalogue of the Preparations in the Anatomical Museum of Guy's Hospital; arranged and edited by desire of the Treasurer of the Hospital, and of the Teachers of the Medical and Surgical School.* By THOMAS HODGKIN, M.D. &c., Demonstrator of Morbid Anatomy and Curator of the Museum at Guy's Hospital. 1829.

THE study of anatomy is replete with difficulties, and these arise not only from its intricacy and specific obscurity, but, in this country especially, from the paucity of the materials and means without which it cannot be effectually pursued. The man who would successfully apply his knowledge of anatomy and physiology to the real object of his study, the removal or mitigation of disease, must not rest contented with the mechanical jargon of the schools, sterile lessons of the processes and foramina of bones, the origin and insertion of muscles, the number and distribution of vessels and nerves. He must not be satisfied with the most perfect acquaintance with the descriptive anatomy of authors, nor even with that glossary of knowledge which might qualify him to demonstrate in a dissecting room. It is not by exertions of memory, however laborious, that the mind can be fitted to exercise an art which requires the most comprehensive and careful employ of judgment to connect it effectively with science. Every external sense and every mental power should be accustomed to the contemplation of the structure of the body, and, as far as is known, the individual and united functions of its several parts. The physician should feel the same kind of familiarity with the human machine as the expert musician does with an instrument: and, to attain this, he must know well its common state, the modifications of which it is susceptible, and the manner in which its powers may be variously increased or repressed. We say the same *kind* of familiarity, for the *degree* must ever differ, as one is a comparatively simple, and the other an infinitely complicated, object of study. As it is intricate and complicated, so much the more reason is there for multiplied means of pursuing it; and, next to clinical experience itself, where disease may be studied through all gradations to its triumph in death, we know of no school more instructive than a well-stored and scientifically arranged anatomical and pathological museum. But such a museum is not an infinite collection of musty preparations, remarkable rather for deviations from nature, both original and produced by time, than for illustrating ordinary courses of disease; all arranged as artificially as the most rigid

disciple of Linnæus might desire: a tattooed head, a monstrous conception, and a necrosed bone, ranged together by way of pleasing variety. Such we have seen, and such may do for the vulgar to gaze at, and for the collector complacently to look over, as so many valuable *curiosities*, and monuments of his cumulating labour. An anatomical museum, to instruct the mind, should, as much as possible, represent the ordinary course of nature, in the production, state, and alteration of parts. The mechanism of the frame, it is true, requires many artificial processes of analysis to acquaint us with its structure and use; but, this knowledge attained, the mind cannot too much accustom itself to view all the powers in combination and acting in concert as one whole, rather than in systems or parts. It is in such combination and concert that the living body presents its properties; and, to an oversight of this, and a too partial view of organization and its elements, we would ascribe the multitude of false theories and erroneous opinions which, as phantoms or false lights, have continually beguiled the student from the path of true knowledge.

It is our pleasing duty to notice the institution of a museum, which, if it go on to maturity as its infancy has begun, bids fair in a few years to equal in extent, and far to surpass in utility, any similar establishment in the kingdom. We know of no instance of zeal for the true interests of the science more creditably or more successfully exerted, than in the formation and philosophical arrangement of the museum at Guy's Hospital, which, in the course of four or five years, has been brought to its present forward and instructive condition. To the benevolent and enlightened zeal of Benjamin Harrison, Esq. treasurer to Guy's Hospital, this institution owes its birth; and when we express our unqualified and grateful praise of the direction and activity of his exertions in the promotion of our science, we know that we shall be joined by every sincere cultivator and well-wisher of our profession. It is not a slight proof of the judgment and discernment of Mr. Harrison, and of the governors of the hospital, that they selected as curator of the museum the able and indefatigable writer of the Catalogue which now lies before us.

To write a Catalogue may be thought a work of labour, rather than of genius or judgment; but, when it is recollected that an arrangement or classification is required to render the Catalogue fit for its purpose, it must appear that a philosophic mind can alone be fitted for the task. Dr. Hodgkin has, we think, judiciously classed the preparations

of both special and pathological anatomy according to the organs or systems of apparatus. This method we prefer to that of elementary tissues, since, however philosophical the latter may be, it still involves many doubtful points, and is not so immediately applicable to practical study as the organic classification.

The Catalogue is divided into three parts. The first comprehends the objects of special anatomy; the second, pathology; and the third, zoology and comparative anatomy. The two first of these include the following sections: 1. Bones; commencing by the vertebral column, as the most essential part of the skeleton, the characteristic of that class of which man is the head. 2. Soft parts about the bones. 3. Vascular, or circulatory systems. 4. Nervous system, and organs of the senses. 5. Vocal and respiratory organs. 6. Digestive organs. 7. Urinary organs. 8. Genital organs of the female. 9. Genital organs of the male. 10. Peritoneum, and (in Part II.) specimens illustrative of hernia. 11. Preparations relating to conception and utero-gestation. 12. Parasytical animals.

The arrangement of Part II. is further regulated according to the nature of the deviation from the normal state, as caused by diminution or increase of the natural function, its various modification, &c.; and thus an additional help is given to the study of the preparations in the museum, which, by means of the Catalogue, the student can himself classify and understand. To most of the sections the author has prefixed introductory remarks; and these exhibit such an acquaintance with the latest writers, as well as talent for original observation and thought, as well entitle them to the perusal of the profession at large. Dr. H. has not given dry extracts from works of anatomy; but, in an interesting and instructive manner, he points out to the student the prominent features of the later opinions and discoveries of anatomists and pathologists, and, with much modesty and judgment, offers his own views respecting them. He has himself been an industrious and zealous observer; and he has enriched the Catalogue with many valuable results of his labours. Our limits will not permit us to do more than glance through the pages of prefatory observations scattered through the Catalogue, and which, if collected and diluted in the ordinary bookmaking fashion, might make a goodly volume.

Before Section i. the author gives a sketch of that part of the systems of unity of formation that applies to the bones of the head, which these suppose to be nothing else than

modified vertebræ. The following remarks are added, and they may be presented as a fair sample of the style and matter of the text.

“ Although the existence of a certain analogy between the bones of the cranium and the vertebræ, not merely in their use, but in their structure, must be admitted by all who will carefully examine the subject, various objections suggest themselves with reference to most of the modes in which it has been attempted to exhibit the application of the principle. It will not be necessary here to do more than offer a few remarks on the system just described, as the result of the labours of Geoffroy St. Hilaire.

“ In the first place, the Professor's mode of reasoning seems to be not altogether exempt from this important defect, that many of the steps of his argument want the support of proof. The ingenious theory of the formation of the vertebræ, originally composed of nine primitive portions, appears to be precisely in this predicament; since, though it may be rendered plausible in one or more particular vertebræ, it is by no means the case with others, whatever be the period of formation at which the examination was made. But, were this point to be conceded to the plea of our inability properly to make the examination of parts so minute and tender as those in question must be in the youngest embryo, a new difficulty meets us in the very next step; since, according to the Professor's own statement, the developement of one or other of the rings or arches attached to the body may acquire an extraordinary developement at the expense of the opposite circle, which, in consequence, is either wholly or partially lost. Hence, on the hypothesis that the cranium is composed of developed vertebræ, it is by no means necessary that the number of its component parts should be an exact multiple of nine. Again, by admitting into the list of bones, parts which are never met with but in form of cartilage, such as the tarsi and septum narium, a wide door is opened to doubt, not to say error. It is this doubt which, *à priori*, induces a suspicion of the correctness of the calculation by which it is attempted to be shewn that seven vertebræ are to be sought among the elements of the skull. Let the facts be examined, and it will probably be concluded, *à posteriori*, that three or four of the supposed anterior vertebræ must be discarded, and the number of primitive sections, or cinctures, analogous to vertebræ, reduced. It is in their important office of supporting and protecting a portion of the central part of the nervous system, by means of an arch or ring fixed upon a body, which, united to its fellows, concurs to form a medial support to the bony framework of the animal, that the bones of the cranium are in some degree analogous to those of the spine. Now, the bones of the face can scarcely be said to participate in these resemblances. Like those of the extremities, they are subservient to functions in which the nerves, or, in other words, the branches proceeding from the centre of the

nervous system, rather than this centre itself, are directly concerned. Though more or less closely brought together upon the median line, they are not therefore necessarily to be considered as the continuation of the central stem, either in function or structure. Were the nerves of smell, instead of being directed to a single organ on the median line, to be distributed to two symmetrical organs more or less widely separated from each other, as is the case perhaps in some insects, we should no more think of seeking in the elements of the nose for the repetition of the mode of formation proper to the vertebræ, than we are disposed to do in those cases of monstrosity in which the lower or posterior extremities happen to be united, so as to constitute a sort of tail. It is unnecessary on the present occasion to push the inquiry further, or to multiply facts, which might be adduced for its illustration. What has been said proceeds from no wish to disparage the principle, but is designed rather to stimulate to its legitimate investigation, and to point out the danger which those incur who are directed in their investigations by the desire of establishing a preconceived hypothesis."

In a page prefatory to section ii. the author notices Meckel's and Home's observations of the globular structure of the fibres of muscles, and brings forward his own and Mr. Lister's examination with the aid of an achromatic microscope of superior power, belonging to the latter gentleman, in opposition to them. They thus discovered linear fibres as far as the magnifying power could reach; and certain transverse striæ or lines, crossing these at right angles, gives a reticulated appearance, which the instruments used by former observers might have represented as globular. On this we suspend our judgment. The result of our own observations, carefully made some years ago, were decidedly confirmatory of the opinions of Home, Prevost and Dumas, and others, and consequently in opposition to that now before us.

The middle coat of the arteries, Dr. H. observes (before section iii.) is merely fibrous, and wants the transverse striæ. The question of absorption is touched upon; and the author advances a curious idea, that the venous and lymphatic systems are subservient to a process of separation in their powers of absorption: "that whilst the lymphatic vessels act more particularly on those fluids which possess an alkaline tendency, the veins, on the other hand, admit the acids and substances allied to them." We confess that this view seems to us too fanciful; and, if it be not refuted by the fact that the venous blood is itself alkaline, we conceive it would be difficult to prove in any instance that it is ever distinctly acid.

Some original observations on the structure of the brain and nerves are presented in the fourth section. In no part of these could the author discover any globular structure; nor is there, as is generally supposed, any medullary matter in the nerves. An extract from an unpublished memoir of M. Foville, of Rouen, on this subject, is subjoined.

Sect. xi. Part i. contains preparations illustrative of the fluids of the body, and their diseases. The microscopical examination of the blood by our author and Mr. Lister is detailed, and, if it be accurate, presents a view of the constitution of the red particles very different from those of the latest observers. They describe them as "circular, flattened, transparent cakes, which, when seen singly, appear to be nearly or quite colourless. Their edges are rounded, and, being the thickest part, occasion a depression in the middle, which exists on both surfaces." They could never detect any central colourless globule, as described by Home, and Prevost and Dumas. Of course, such observations, opposed as they are to those which have preceded, require strong confirmation before they can be admitted.

The second Part, comprising the preparations of morbid anatomy, is enriched by the short descriptions added to each preparation, with many references to the hospital books, and other sources of more extended detail of the cases from which they were derived. These are their best comment; and, without such information, we think specimens of morbid anatomy little better than pieces of curiosity.

Dr. H. introduces the fifth section by some interesting remarks and extracts respecting goitre and cretinism. He very properly rejects the opinion that the drinking of snow water is a cause of goitre. It is very strange that such an hypothesis should ever have prevailed. Descending from the valley of Chamouix, by the valley of the Trient and the Forclaz, we asked our guide how it was that the inhabitants of these high regions never had goitre? "O!" said he, "that is *because they drink snow water*: it is those that live in the Vallais, and drink *les eaux des marais*, that are goitreux. Be this as it may, it is certain that, instead of prevailing more, goitre nearly or entirely disappears in all those elevated situations, which are most directly supplied by snow water. Dr. H. says,

"I confess that I am inclined to accuse the water; but surely not because it once existed in the solid form. The salts of lime appear a much more likely cause. Of the water in those parts of South America in which bronchocele occurs, I know nothing; but I have seen goitre in an evidently calcareous district in Normandy.

Chalk abounds in Sussex, and limestone in Derbyshire and Yorkshire. Goitre has at various times appeared amongst the children at a large school in the last-mentioned county, and disappeared at intervals; and those changes have coincided with circumstances affecting the water used as drink by the children. Sometimes it was rain water, when the goitre ceased; sometimes from one spring, sometimes from another."

We cannot fall into our ingenious author's opinion without far more convincing evidence than we have yet seen adduced. That a calcareous impregnation in the water used for drink may be one of the causes that contribute to produce goitre, we are not disposed to deny; but that it is the only cause, we think disproved by the fact that, in many calcareous districts, where the water so abounds in carbonate and sulphate of lime that culinary utensils become furred by the deposit, and muriate of barytes produces an abundant precipitate, this affection rarely or never occurs. Thus it is in the more open and level parts on and about Salisbury plain, the substratum of which is chalk, of all forms of carbonate of lime the most liable to solution. We are more inclined to accuse *the air*; and whether it be by humidity, or any other state arising from terrestrial exhalations, we do not see how the situations in which this disease is most generally produced, can operate through any other medium. We believe that goitre rarely occurs in a flat or open district; and, in mountainous countries, it is in the lowest and deepest valleys, gorges so abruptly walled, or whose sides are so covered with luxuriant vegetation that the sun's rays and purifying winds can but imperfectly enter, the margins of stagnant water and damp marshy bottoms, that are the most remarkable, if not the only, places of its occurrence. The higher valleys, however narrow and secluded they may be, are preserved from the excessive accumulation of humidity by the greater scantiness of vegetation, and the freer evaporation under diminished atmospheric pressure. These remarks agree with, and in fact have arisen from, many observations which we have personally made both in Switzerland and in Britain.

We cannot agree with Dr. H. in entirely separating bronchocele from cretinism. That goitre often occurs without any of the disgusting characteristics of the miserable cretin, is quite certain; but we believe that cretinism is never met with where goitre is not also to be found. The valley of the Rhone above the lake of Geneva, particularly the neighbourhood of Martigny, presents the most frequent examples of cretinism; and in these situations there

seems to be an excess of those causes to which we have attributed the production of goître.

There are some interesting remarks prefixed to the sixth section, on the structure of the liver, and the author directs the attention of pathologists to the manner in which the acini, and the interstitial structure respectively, become affected by disease. It is on the increase of the acini that most cases of enlargement of the liver depend; and it is in these also that the fatty degeneration takes place. It is rather singular that so few cases of this disease should have been met with in England; since Louis remarked it in a third of his phthisical patients.

We must pass over the observations introductory to the remaining sections; not from their want of interest, for some are very curious, as, for example, those on conception and monstrosities; but that we conceive we have done enough to show the merit of the author in the composition of this valuable Catalogue, and in the arrangement of the Museum. The wax preparations we have examined with attention and admiration: they are, indeed, the pride of the Museum, and we were most agreeably surprised to find that such beautifully exact representations of disease had come from the hand of a native artist, Mr. JOSEPH TOWNE. Cutaneous diseases are thus represented far more strikingly and truly than could be done by the most highly-wrought paintings; and we congratulate the teachers of the School of Guy's Hospital in having at their command such means of conveying instruction, as no other lecturers in this country possess.

We conclude by most heartily wishing success to the institution; and we think that Dr. Hodgkin has conferred a real benefit both on the School of Guy's Hospital, and on the profession at large, by the patient and zealous labour which we have discovered in his work.



## COLLECTANEA.

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Floriferis ut apes in saltibus omnia libant,  
Omnia nos, itidem, depascimur aurea dicta.

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## PATHOLOGY.

*Gonorrhœa and Syphilis.* The common notion prevails, that proper gonorrhœa, being a simple inflammatory secretion of the mucous membrane, and not acting as a poison upon the system, the lues or syphilis is altogether a distinct disease. Let us examine this opinion. I have said, that whilst on both sides the surfaces remain sound, no constitutional disease is discoverable. But before we decide that the matter secreted in gonorrhœa and in syphilis have no relation to each other, we must shew that the gonorrhœal secretion being absorbed into the circulation, as in the case of superficial sores, is incapable of producing constitutional, or as they are called secondary, symptoms. Now I aver that such a connecting link between these diseases exists, and is palpable to observation. I have already described the symptoms arising from the absorption of the gonorrhœal matter, and it cannot, I think, be denied that the resemblance is such to those of syphilis, as to established their very intimate relation, if not their identity. If a constitutional disease be traceable through the medium of gonorrhœal sores in a subject hitherto immaculate, the next step in the inquiry is to determine the operation of a constitution already tainted with the poison of gonorrhœa upon sores of this description. Are not the natural secretions of the bowels, the skin, and the kidney, influenced by the deranged state of the constitution? Are not the morbid discharges from simple wounds and ulcers, having their origin in casualties, also subject to vitiation from a similar influence? We know that the unhealthiness of the matter of ulcers and suppurating surfaces, of whatever description, is constantly and truly referred to a prevailing morbid state of the system. Thus, if a poisoned habit contracts a sore, though the sore may have been caused by an accidental lesion of the skin, it becomes at once contaminated, and secretes a virus possessing properties not observed to belong to the secretion of a fresh and healthy system: the property, for example, of exciting upon a new surface an inflamed vesicle or pustule, which is followed by an excavated ulcer, instead of a superficial, raised, or level sore, and which runs into phagedenic ulceration, whether on the glans penis or the tonsil; of affecting parts of the system not within the ordinary range of the milder poison, as the iris and the periosteal membrane; of exhibiting cutaneous eruptions, peculiar in colour, figure, &c., and differing somewhat in other respects, though that remains for future search to determine, from the class to which they respectively approximate.

From this observation it would seem that the gonorrhœal and syphilitic poisons are the same in kind, and that the only difference between them consists in the degree of their intensity and the extent of their operation. The purely *local* production of the gonorrhœal matter, prior to the participation of the constitution, would lead us to expect a wide difference between the secondary symptoms of gonorrhœal sore and those of lues; in which last the sore is as much constitutional as local, and the matter secreted is in effect a poison. For I consider that the primary sore of lues is in its nature a constitutional or

secondary sore, having originally been the production of a system already impregnated with the venereal poison. The matter of poison being once engendered, its communication to another requires no such conditions as a breach of surface or an impure constitution in the recipient. In its most intense and concentrated form it may at once be communicated by its proper irritation and inflammation to a novice, and the recurrence of the circumstances stated as explanatory of its origin and derivation from the gonorrhœal stock, must be sufficiently frequent to perpetuate and renovate the matter of infection without limit.

It appears that a simple or primary gonorrhœal sore may, and frequently does, communicate a constitutional disease, bearing incontestable evidence of a poison analogous in general character, but milder in degree, more limited in the sphere of its operation, and from this and other circumstances capable for the most part of being distinguished from that of syphilis. The signs of distinction are becoming artificial and obscure, and the bases of them will in all probability be eventually overlooked and forgotten. Further, a sore of any kind formed on the genitals of a person whose blood circulates the gonorrhœal poison, becomes capable by its secretion *sui generis*, the type of the poison, of communicating syphilis, viz. of raising a vesicle or pustule, followed by a circumscribed, excavated, hard-edged ulcer, which, if not restrained by the action of mercury, is disposed to extend in depth and breadth, and, in short, destroy substance indefinitely, which is the local characteristic of the most active syphilitic poison.

From what has been stated I derive the following conclusions :

1. That absorption does not take place from sound surfaces, and therefore the poison of gonorrhœa, if it be one, is not developed in the system. In the very rare cases in which constitutional symptoms follow gonorrhœa in the absence of a visible sore, I refer their existence to absorption from an ulcer in the urethra.

2. The gonorrhœal matter, though apparently the simple secretion of an inflamed surface, is capable, when absorbed into the system, as from sores, of acting as a poison in the production of constitutional symptoms.

3. That the venereal poison is essentially one; for analogous secondary or constitutional symptoms succeed to analogous primary sores, in systems previously healthy.

4. That the distinction between the gonorrhœal and syphilitic orders of symptoms, primary or secondary, is demonstrative of the difference between the secretions of a system previously healthy and the secretions of a system already charged with a poison.—*Observations on the Pathology of Venereal Affections*, by BENJAMIN TRAVERS, F.R.S. &c.

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*Cases of simple Ileus.* (From Dr. ABERCROMBIE on Diseases of the Stomach.)

*Ileus fatal in the State of Distention, without Inflammation.* A man, aged forty, 20th August, 1814, had violent pain of the abdomen, argent vomiting, and costiveness. The pain was at times increased by pressure, but not uniformly so; his pulse was generally about 96, but at last rose to 120. The attack had commenced with symptoms resembling cholera, which had speedily passed into those of ileus. Repeated bloodletting and the other usual means were actively employed, and his bowels were moved on the 29th, but without relief. I saw him on the 30th. His abdomen was then distended,

tense, and tympanitic; his strength was rapidly sinking; and he died the same afternoon. For some time before this attack, he had been affected with slight symptoms, which had been referred to the liver.

*Inspection.* A large portion of the small intestine was in a state of great and uniform distention, without any appearance of inflammation. The lower part of the right lobe of the liver was unusually soft. No other morbid appearance could be discovered on the most careful examination.

In the symptoms of this case at its commencement, there was a complication which, perhaps, may remove it in some degree from the correct history of ileus; though the fact of cholera passing into ileus is by no means uncommon, and the fatal symptoms were simply those of ileus. The following, perhaps, was a more decided example, and showed the affected parts in the state of high distention, with a slight and recent blush of redness, not amounting to inflammation, or, at least, not to such a state of it as could be considered the fatal disease.

A woman, aged twenty, 23d June, 1813, was affected with violent pain at the upper part of the abdomen, extending towards the left side, and at times increased by pressure; frequent and violent vomiting, and obstinate costiveness. The belly was distended and tense; the tongue white; pulse 76, and small. On the 16th, she had got wet during the flow of the catamenia, which ceased, but returned at night; pain about the umbilicus began on the 17th, and increased gradually; vomiting began on the 21st, with hiccup. Blood-letting, with various purgatives, injections, warm bath, &c. were actively employed by a physician of eminence.

24th.—Incessant screaming from the violence of pain; frequent hiccup; no stool; pulse 88, and small; frequent vomiting; belly distended and tender; every medicine was instantly vomited.

25th.—No stool; every thing vomited; pain almost gone; pulse very feeble.

26th.—No stool; free from pain; vomiting continued, with hiccup. Died in the night.

*Inspection.* The whole of the colon, and about twelve inches of the lower extremity of the ileum were empty, contracted, of a white colour, and seemed perfectly healthy. The remainder of the small intestine was distended to the greatest degree, so as to appear thin and transparent; its contents were chiefly watery matter and air. On the surface of the distended intestine, there was on several places, especially at the lower part near the contracted portion, a superficial blush of vivid redness, but without any appearance of exudation. There was a small abscess in the left ovary. All the other parts were healthy.

A remarkable feature in this case is the mode of its termination, namely, by rapid sinking and cessation of pain, resembling the symptoms of internal gangrene, yet with the inflammatory appearance in its earliest stage. It is also to be observed, that the pain was increased by pressure as early as the 23d, when we can scarcely suppose any inflammation to have existed; and the same happened in the former case, where there was no appearance of inflammation.

*Ileus fatal with Distention, and a dark Livid Colour of the Parts without Disorganization.* A lady, aged seventy, after her bowels had been confined for several days, was seized on the 5th January, 1820, with violent pain of the ab-

domen and vomiting; pulse natural. The usual means were employed by Mr. White without relief. On the 6th, the pain was considerably abated, but there was severe sickness, with frequent vomiting, and obstinate costiveness; the pulse from eighty to ninety. The belly was natural to the feel, and without any degree of tenderness. On the 7th, the same symptoms continued; the pulse eighty. Towards the afternoon, sinking began to take place, and she died in the night.

*Inspection.* The colon contained a great deal of hardened feces, but appeared quite healthy and without any flatulent distention. The lower extremity of the ileum, to the extent of eighteen inches, was empty, contracted, and of a white colour, like the intestine of an infant; immediately above this, a portion from eighteen to twenty-four inches in extent was throughout of a livid brown colour, or nearly black, but without disorganization or softening, and without any appearance of exudation. This portion was considerably distended, and the whole of the remaining part of the small intestine to the very commencement of the canal was in a state of uniform and great distention, and of a dull leaden colour, with here and there portions of a dark livid brown. It contained only thin fluid feces and air. There was considerable disease of the internal surface of the abdominal aorta. The other parts were healthy.

The part chiefly affected in this case would appear to have been in an intermediate stage of that condition which passes into gangrene; and, it is worthy of observation, that it was without any appearance of inflammatory exudation.

*Ileus fatal by Gangrene without Exudation.* A boy, aged twelve, (26th Oct. 1813,) was affected with violent pain of the belly, chiefly round the umbilicus, urgent vomiting, and costiveness for two days; abdomen distended, pulse fifty. Various remedies were employed without benefit. On the 27th, the pulse rose to 120, with increase of the pain, tension and tenderness of the abdomen. Bloodletting was used in the morning, and again at three P. M.; after which the pulse fell to 112. The other usual means were employed without procuring any evacuation from her bowels; the pain continued unabated; sinking took place, with coldness of the body; and he died between seven and eight o'clock in the evening, having continued in violent pain until immediately before death. I did not see this case during the life of the patient, but was present at the examination of the body.

*Inspection.* The stomach was healthy; the small intestine was a little distended and slightly inflamed; especially at the lower part, where it had contracted some adhesions. The whole right side of the colon was in a state of gangrene, especially the caput cæcum, which had burst and discharged into the cavity of the peritoneum a large quantity of fluid feces. The diseased parts appeared to have been much distended, and, after being emptied by the rupture, had not contracted, but had fallen flat, presenting a very broad surface like an empty bag. There was no inflammatory exudation; and, at the upper part of the ascending colon, this diseased part terminated at once in healthy intestine, which was white, collapsed and empty. This was the state of the remainder of the colon, except the sigmoid flexure, which, with the rectum, contained much consistent feces.

*Ileus fatal by Gangrene combined with Exudation.* A young man, aged nineteen, (17th Oct. 1813,) was affected with violent pain round the umbilicus;  
No. 376.—No. 48, New Series.

incessant vomiting; abdomen hard, tense, and tumid; bowels obstinately costive; pulse 84; countenance depressed and anxious. He had been ill six days, during which a variety of remedies had been employed without relief. He was now treated by repeated general and topical bleeding, blistering, various purgatives, purgative and tobacco injections, and all the other usual remedies, but without any permanent relief. On the 18th, the pulse was 120, and the belly tympanitic; the vomiting was urgent, but not feculent, and there was some slight feculent discharge by the injections. On the 19th, the symptoms were somewhat abated; but on the 20th, they again increased; the pain violent, the vomiting incessant, the belly much distended: the pulse from ninety-two to ninety-six; slight discharge of watery matter by stool. He died on the 21st.

*Inspection.* The stomach was healthy. Almost immediately below it, the intestine was distended to the greatest degree. It was in some places thin and transparent; in others, highly inflamed and gangrenous, and bursting when handled; and in others firm, though perfectly black. This state continued to the middle of the small intestine, where a portion, twelve inches in length, was empty, contracted, and healthy. Below this, the canal was again diseased as in the parts above, distended, inflamed, gangrenous, and adhering by extensive exudation, until three inches from the extremity of the ileum, where it became again contracted, empty, and of a healthy colour. These contracted portions were quite pervious, easily dilated, and, in their coats, appeared perfectly healthy. The colon was healthy and collapsed, except at its lower part, where it contained some consistent feces. The distended portions of intestine were chiefly filled by air; there was in some places thin feculent matter, but in small quantity; and no consistent feces could be found in any part of it.

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#### PRACTICAL MEDICINE.

*Ergot in Intermittent Fever.* It is stated in Rust's Magazine, vol. xxix. No. 3, that Dr. MEHLHAUSEN, of Eilau, has employed the ergot in intermittent fever, and he is persuaded that it is a remedy deserving the attention of physicians in that disease. In the autumn of 1828, he made his first trial with the article, by prescribing it in seven uncomplicated cases, five of which were entirely cured by it, viz. three quartans and two tertians: one of the remaining cases was removed from under his care soon after the treatment was commenced; in the other, a debilitated subject, sixty years of age, the ergot produced no effect, and the cure was effected by the bark. The ergot was given in doses of ten grains every two hours before the expected paroxysm. In debilitated persons, only six to eight grains were given at once. Of course, this remedy is totally inadmissible where there is the least suspicion of pregnancy.

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*Sulphate of Copper as a Remedy in Croup.* In Hufeland's Journal for May 1829, Dr. FIELTZ relates five cases of croup, for the purpose of proving the efficacy of sulphate of copper as a remedy in that disease. We give the following as examples.

CASE I. Emily S—, three years old, of a weakly constitution, and inclined to scrofula, had lost an elder sister five days before by the croup, and was attacked, January 23, 1824, with fever, a short hoarse cough, indistinct articulation, and laborious respiration, with some degree of rattling in the chest.

An emetic was directed, and followed in the evening by four grains of calomel. A considerable quantity of viscid slime was discharged by vomiting. In the evening, all the symptoms augmented, the cough assuming more and more the croupy sound. By the emetic the bowels had been once opened. Four leeches were now applied upon the neck, and a blister over the upper part of the sternum; every two hours a quarter of a grain of sulphate of copper in sugar being administered. By the first doses vomiting was in a few minutes produced, by which a quantity of viscid mucus was discharged. After midnight the child became more composed, the skin was covered for several hours with moisture, and towards morning a tolerably quiet sleep ensued. The next morning all the symptoms were found to be greatly abated. An eighth of a grain of digitalis was added to each dose of the sulphate of copper, and for drink lukewarm sugared water. During the day the cough and respiration lost entirely the croupy sound, and several hours of sleep were obtained at night; interrupted, however, by occasional attacks of a loose cough. By the third day the patient became sprightly, cheerful, and very shortly entirely free from all disease.

CASE II. Julius R., three years old, stout and healthy, was, on the 28th of February, 1824, suddenly taken ill with a severe hollow cough, indistinct articulation, very difficult respiration, attended by symptoms of suffocation. The slightest pressure upon the larynx caused the patient to scream aloud. The face was dark red and tumid, the eyes glassy, mouth and tongue parched, the whole body hot and dry; pulse quick, hard, and contracted; violent pulsation of the arteries of the neck; urine passed involuntarily. Five leeches were directed to the throat, the bleeding from which to be kept up for three hours, followed by a blister on the upper part of the sternum, and every two hours a quarter of a grain of sulphate of copper in sugar.

Next day, patient better; had passed a tolerable night. The first doses of the Sulph. Cupri had occasioned repeated vomiting. Cough and hoarseness still continue. At noon, the patient was covered with a profuse sweat; had slept; cough and respiration more free. In the evening, exacerbation of fever, with increase of the other symptoms. An eighth of a grain of Digitalis was added to each dose of the Sulph. Cupri.

March 1st.—During the whole night, patient in a profuse perspiration; the cough has lost its croupy sound, other symptoms abated. An emetic of twelve grains of Sulph. Cupri had produced a discharge of a quantity of very consistent mucus. The powders to be discontinued until evening, and a mixture of the muriate of Ammonia given.

By the 4th, all the symptoms of the disease had disappeared.

On the 12th, the child having ventured out too soon, the disease returned, but with less violence. Two grains of Sulph. Cupri were administered, and produced frequent vomiting of a thick mucus. Minute doses of the Sulphate of Copper and Digitalis were then commenced with, by which, and light diaphoretics, in a week the patient was entirely cured.

#### SURGERY.

*Prolapsus Ani, treated after the manner of Mr. HEY. By Dr. MACFARLANE.  
—Glasgow Med. Journal.*

W. A., shoemaker, æt. fifty-four, became a district patient in February. The gut descended for more than two inches in every attempt to pass the

feces, accompanied with great pain and tenesmus. When he remained for a few minutes in an erect position, the same displacement took place slowly, although no propulsive efforts were made: this, however, could be prevented by pressure. The first part projected from the anus was a circular fold of the mucous membrane of the rectum, at its verge, of a livid colour and tuberculated appearance; and this was soon followed by the complete descent of the bowel, and hemorrhage from many points. The recumbent posture, and gentle but continued pressure for a few minutes, generally effected the reduction of the prolapsus, although at an earlier period it often continued irreducible for hours. The general health of the patient was much impaired, and he was prevented from following his employment by the constant irritation and almost daily attacks of hemorrhage.

On examining the anus after the gut was replaced, the surrounding integuments were found extremely relaxed. There existed such an unnatural looseness in the attachment of the skin around the anus to its corresponding cellular membrane, that it could be easily drawn out with the fingers in the form of one or more large flaps.

Having succeeded, in two similar cases which came under my care in the Royal Infirmary, in completely curing the disease by cutting off the loose integuments, as recommended by the late Mr. Hey,\* I determined to try it in this case. The skin was drawn out as far as possible into broad flaps, and cut off with the scissors in a circular direction, until all the superfluous integument was removed, including a portion of the livid and tuberculated fold of the mucous membrane, which was projected from within the sphincter. The pain was trifling, and only a few drops of blood were lost. A soft compress and a T bandage were applied, and he was strictly confined to bed. For a few days a partial procidentia took place on every attempt to go to stool. He had a good deal of pain and inflammation around the anus, attended with complete retention of urine, which required the frequent introduction of the catheter. In ten days after the operation, he was able to walk about and void his stools, without any return of the disease; and in three weeks he was perfectly cured. Pressure was continued to the part for some time longer; occasional doses of castor oil were prescribed, and he was enjoined to avoid straining at stool.

There will generally be found, in obstinate and long-continued forms of this disease, a great relaxation in the connexion of the rectum at its lower part with the surrounding textures. This circumstance, although it may not be the original cause, is sufficient in many cases to account for the displacement in chronic and inveterate cases, although I believe it is generally accompanied by a diminished power of the sphincter. If the rectum, in consequence of being much irritated, as in various bowel complaints, ultimately becomes relaxed, the tenesmus, which is an invariable attendant, may so overcome the sphincter as to give rise to a procidentia: but when, as in the case now detailed, an erect position is sufficient to cause the descent of the gut, we have grounds for believing that, besides the relaxed state of the rectum, there exists a want of power in the sphincter muscle, which part, along with the levator ani, is mainly instrumental in maintaining the rectum in its natural situation. In the cases detailed by Mr. Hey, there existed, in combination with relaxation of the integuments, one or more livid tubercles at the verge

\* Practical Observations in Surgery, 2d Edit. p. 444.

of the anus, which were also removed. He expected from this operation that inflammation of the surrounding cellular texture would be excited, the attachments of the rectum consolidated, and the power of the sphincter improved. In a majority of cases, the disease will be found to yield (although the cure is often tedious and protracted) to the local applications and internal remedies usually employed. Should it continue, however, as sometimes happens, after the exciting cause has been removed, we shall occasionally find that the loose state of the skin around the anus and the relaxed attachments of the rectum at its termination, become the primary causes of the continuation of the disease. It is, I conceive, in such circumstances that this simple operation may be beneficially adopted.

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*Case of Umbilical Hernia treated by Ligature.* By MR. ROBERT COWAN, Surgeon. (*Glasgow Med. Journal.*)

In 1827, I was called to visit a child about three months old, which, on examination, was found to have an umbilical hernia, as large as an hen's egg. No herniary tumor existed at birth, nor for at least ten days afterwards; and the tumor had been noticed only the day before I saw it, by the child's mother, after the nurse (who in all probability conceived it to be owing to her carelessness) had left the house. The child had experienced repeated attacks of colic, attended with such an irritable state of the bowels, as to require opiate clysters and opiates to be frequently administered.

Attempts were made, by means of a compress and bandage, to keep the hernia reduced, and allow the aperture through which it had passed to become obliterated; but these proving ineffectual, the plan of applying half of a ball sufficient to cover the opening, and securing it by means of adhesive plaster, as recommended by Sir Astley Cooper, was tried, and with equal want of success. These attempts proving abortive, and the frequent renewal of the bandages being a great source of annoyance to the infant, it was resolved, notwithstanding the arguments advanced by Scarpa and others against the employment of the ligature, to attempt a cure by its means, in the mode adopted by Desault.

Accordingly, the child having had the previous day a dose of castor oil, with the assistance of my friend Dr. John Cooper, the hernia, which was entirely intestinal, was reduced, and a small round ligature firmly applied around the neck of the sac, as close to the abdomen as possible. This gave little uneasiness; and a warm bath, prescribed in the evening, procured a comfortable night. On the third day a fresh ligature was applied, which produced sloughing of the part: on the fifth a third ligature was applied; and on the seventh day from the operation the included portion dropped off, leaving a small sore, which was dressed with dry caddice, a small compress, and a strip of adhesive plaster.

In another week the sore was entirely healed, but the compress and strap were continued for three weeks longer, at which time the aperture in the umbilicus was as completely and as firmly closed as in children for the same age.

I have since occasionally examined the part, and the cure is complete.

In the umbilical hernia of children, the protruded parts escape directly through the umbilical ring; in that of adults, unless the hernia has existed from infancy, the aperture is in the abdominal parietes near the umbilicus, never in the umbilical ring itself.



What distinguishes the umbilical hernia of childhood from every other species of hernia, is the strong natural tendency to contract, which exists till about the age of nine years, in the aperture through which the viscera protrude; and which contractile tendency, greatest immediately after birth, gradually decreases till about the period mentioned, when it ceases altogether.

In some instances umbilical hernia is congenital, and when so, is not unusually accompanied with malformation of the abdominal muscles. Most frequently, however, it first commences about the age of two or three months\*, and unless attended to is apt to increase in size, and prove a continual source of irritation and annoyance. The inherent tendency in the aperture through which the viscera pass to contract, is in many cases strong enough to produce a natural cure, but more generally the aid of art is requisite.

Two plans of cure have been proposed, viz. compression and the ligature. By means of the former, the protruded viscera are reduced and the aperture kept closed, either by bandage and compress, or by introducing a segment of a small ball into the opening. It is quite obvious that this latter mode is objectionable, from the ball producing precisely the same kind of resistance to the closure of the aperture as the viscera did. The plan of cure by compression is most generally adopted.

The other method of cure is by the ligature, as in the preceding case; and this may either be employed when compression has failed, or, as was the practice of Desault, in preference to it.

Celsus, in his Chapter de Umbilici Vitiis, describes the mode of curing umbilical hernia by the ligature. He, however, makes no distinction between umbilical and ventral herniæ; and so far from being aware that this operation was likely to be most successful with infants, he expressly forbids its performance on any below the age of seven, or above that of fourteen years.† The operation by the ligature seems not to have been practised in modern times till Saviard operated, and that successfully, on two children under fourteen months old. His example was not followed, and till the time of Desault was entirely neglected.

Desault revived the use of the ligature in the umbilical hernia of children, an operation founded on a correct idea of the anatomical structure of the part; and especially on the fact that the opening through which the viscera pass has the strong natural contractile tendency already alluded to. It has been alleged that Desault revived the operation described by Celsus; but the absurdity of this idea is rendered apparent by the quotation already made from that author's works. Desault operated on at least fifty patients, none of whom he lost; and from the result of these he has drawn the following conclusions: 1st, That the sooner after birth the operation is performed the more certainly will a cure be effected; 2dly, That at the age of four years a cure is effected with some degree of difficulty; and 3dly, That, at nine, the contractile tendency in the aperture being almost entirely lost, the cure is nearly impossible.

The operation for the cure of umbilical hernia by the ligature has, since the

\* Desault.

† Nam curationi neque infans, neque aut robustus annis aut senex aptus est sed a septimo fere anno ad quartum decimum.—*Celsus de Medicina*, vol. ii. p. 377.

death of Desault, fallen into disuse; and to this the opinion of Scarpa has, in no small degree, contributed.

It has been objected to this operation, that it is sometimes ineffectual. This is certainly the case if performed when the contractile disposition in the ring has ceased; and the same objection may with equal propriety be asserted of the mode by compression.

Others allege it to be dangerous, especially if a portion of intestine is included in the ligature. When properly and carefully performed, this objection can never occur. Inflammation, irritation, and even death, it is said, have followed the operation, even when every thing has been well done. This is very possible, and yet in Desault's fifty cases no death took place.

When the ligature has succeeded at first, it is alleged the cicatrix has afterwards given way, and a hernia formed a second time.

I confess it was with surprise I found, in the work of Scarpa, this opinion attempted to be supported by a supposed analogy between the operation of the ligature in the umbilical hernia of children, and the barbarous treatment of inguinal hernia by the ligature of the hernial sac and spermatic cord in the adult. It is stated that, in this latter case, the cicatrix is apt to give way unless a truss is continually worn.

The two cases bear no analogy to each other: in the inguinal hernia the opening possesses no disposition to contract, while that in the umbilical hernia of children does so: and, besides, when a cure has followed the use of the ligature in umbilical hernia, the navel is at least as firm as in those children who never have had this disease.

M. Cartier also, overlooking the anatomical structure of the navel, declares, that since "la cicatrice n'empêche pas toujours la recidive de la hernie inguinale ou crurale chez les sujets qui en ont été opérés, on ne doit pas, à plus forte raison, compter sur une guérison radicale après l'opération de la hernie de l'ombilic chez les enfans."

This opinion is not corroborated by experience; for, as stated above, the navel is as strong after the termination of the cure of the umbilical hernia by the ligature, as it is in those infants who have never had hernia.

Dupuytren has operated on umbilical hernia in children by the ligature many times, and always with the happiest effects; and many cases are scattered over the pages of our numerous periodicals in which the operation met with equal success.

In the umbilical hernia of children, I would, in deference to the expressed opinion of the profession, first attempt the cure by compression merely: if this failed, or was very annoying to the child, from the difficulty of retaining the necessary bandages *in situ*, recourse would be had to the ligature, as in the preceding case. From the experience of Desault, as recorded by Bichat, it is fair to infer that, under proper limitations, this operation is both safe and efficacious; and though, in the greater number of instances, a cure is possible by compression alone, still there are others where this fails, and in which the ligature will succeed.

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*Chlorate of Lime successfully employed in a Case of Cancer Aquaticus.* By M. BERNDT. (*Journ. der Pract. Heilkunde.*)

The Noma, or aquatic cancer, is a species of gangrenous pustule of the lips, peculiar to children, and of the nature of which no definite opinions have

yet been formed. The local application of the pyroligneous acid has been much vaunted in this disease. In the present case it failed, as well as the hydrochloric acid, and many internal remedies. Mr. B. then applied the chlorate of lime to the ulcer, and in the course of a few days the wound assumed a favorable aspect, and it soon healed. The chlorate of lime was made into a paste with a small quantity of water, and applied to the lip of the child. It was applied every two hours during the day, and three times in the night. In proportion as the severity of the disease was diminished, the remedy was less frequently used, and at the end of eight days it was given up altogether, and an ointment substituted of balsam of Peru and myrrh.

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## INTELLIGENCE.

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### COLLEGE OF PHYSICIANS, May 3.

THE chair this evening was taken by Dr. ROBERTS, when a paper was read by the registrar, Dr. HAWKINS, consisting of

*Observations on the Blood ; by WILLIAM STEVENS, M.D.*

The author remarked that there is often, in the West Indies, a malignant form of yellow fever, in which it is obvious, from the symptoms during life, as well as from the appearance presented after death, that the disease has had its chief seat in the fluids. The cause of death, he thinks, under such circumstances, only becomes apparent when we open the heart and observe its contents. In this we find "a dissolved fluid," in place of blood, which is black as ink, and unfit for the purposes of life. These and various other circumstances induced Dr. Stevens to pay particular attention to the blood, and to make a number of experiments upon it, the results of which we subjoin.

The importance of the blood, and of the changes which it presents, have been comparatively neglected for nearly a century; and to this the author attributes the assumed fact of our "going back" in the theory of fever, at a time when such brilliant discoveries have been making in other departments of medical science. On examining the blood of those who had died of yellow fever, the following changes presented themselves.

1. It was more fluid than natural; a circumstance partly attributed to an excess of serum and partly to the fibrin not being found in its usual quantity. Besides this, the colouring matter was observed to be frequently detached from the globules, and dissolved in the serum; nor can this colouring matter be separated from the serum by filtration, or any other mechanical means. As the disease advances, however, the red colour is lost, and the whole circulating current becomes black, as well as thin.

2. The whole mass of blood, both in the arteries and veins, was changed to this black colour. Dr. S. has often taken black vomit from the stomach, and blood from the heart, and these have resembled each other so much as to render it almost impossible to distinguish them.

3. In bad fevers the saline matter appears to be exhausted faster than it enters the circulation; the blood losing its saline taste; of which circumstance the black colour is found to be a certain proof.

4. The blood, though dissolved, is not putrid; but dissolution is regarded by the author as the first step in the putrefactive process. Such dissolved state is held to be the cause, and not the consequence of death; being sometimes present during life. But it is stated to be the effect, not the cause of fever. Now, as this dissolved condition is regarded by Dr. Stevens as being frequently the sole cause of the fatal termination, so it became an object with him to discover some agent capable of preventing this change.

Saline matters, it is observed, are generally antiseptic; during fever they are diminished in quantity; and hence it was thought that their administration, in the form of medicine, might be advantageous. Accordingly this was done; and, after repeated trials, the author became convinced that, when properly administered, they have "a specific effect" in preventing the dissolution of the blood.

Witnessing these results, and recollecting that various neutral salts pass into the circulation unchanged, Dr. Stevens was led to try what effect would be produced when these and other substances were mixed with the blood while it was yet warm and fluid.\* The results were, 1st, that acids, as a general rule, rendered the blood darker; and this in proportion to their strength. When any of the strong acids was mixed with a little water, and added to recently drawn blood, this immediately became changed from red to black. Even the vegetable acids produce this effect.

2dly. The alkalies produce a similar change, though not in so remarkable a degree.

3dly. The neutral salts immediately give to venous blood a bright scarlet colour. This effect likewise resulting although the alkali might be a little in excess, as in the subcarbonate of soda.

4thly. Even the black and morbidly attenuated blood taken from the heart in fatal cases of yellow fever, was similarly changed into a bright red fluid by the addition of neutral salts.

Dr. Stevens proceeded to state, that he intended to enter on the subject more fully in a work which he is about to publish; when he will endeavour to prove that black is the natural hue of the colouring principle of the blood, and that the various properties resident in blood depend on the quantity and condition of its saline impregnation.

In drawing his inferences, the Doctor argued that, in violent fevers, even when proper means are used, chemical changes nevertheless frequently take place in the circulating fluids, and that these changes "are almost always the sole cause of the mortality." The deterioration of the blood, in the fevers of hot climates, is said to be very obvious, and to occur in the milder forms of the disease witnessed in this country, as proved by the experiments of Dr. R. Clanny, of Sunderland.

As the counterpart of this, it is held that, when efficient means are used "to protect the organs" during the early stage, and proper diet and saline medicines are subsequently exhibited, the bad symptoms are generally warded off. These are supposed to act chiefly by preventing the "dissolution" of the blood till the fever abates and the danger is gone. A method of treatment, founded on these views, is stated to have been remarkably successful, both in the hands

\* The best mode of conducting this experiment is to mix the agent so employed with a little water, and add to it the blood before it coagulates.

of the author and others. Thus, fever prevailed at Trinidad in 1828: the patients were bled and purged freely at the commencement; then they had neutral salts; during their convalescence, quina; and one of Dr. Stevens's correspondents, Mr. Greatrex, stated that, of 340 cases so treated not one proved fatal. On the contrary, emetics, calomel, antimony, opium, and acids, are represented as increasing the evils they are intended to relieve; and, in fact, as greatly augmenting the rate of mortality in the fevers of hot climates. The Rochelle salt, and the carbonate of soda, were particularly mentioned by Dr. Stevens, though not to the exclusion of "other active saline medicines;" and, in conclusion, he stated that, since the treatment above alluded to had been adopted, the yellow fever had been in a great measure disarmed of its terrors.

#### COLLEGE OF SURGEONS.

MR. GUTHRIE, in completing the surgical part of his Lectures, as Professor of Anatomy and Surgery to the College, on Saturday last, showed the instrument used for breaking up stone in the bladder, with an improvement which he said he considered of the greatest importance, as far as regarded the safety of the patient. It consisted in a peculiar manner of fixing the shaft of the forceps, by means of which the instrument could be taken to pieces, either when closed or open in the bladder, and each piece of which it was composed might be withdrawn separately. He said he was led to make this improvement in consequence of the instrument having been clogged when used by him near five years ago, and he was the first surgeon who had used it in this country. He had been informed that two persons on the continent had lost their lives in consequence of the instrument having, by some accident, become fixed when open in the bladder, so that it could not be withdrawn. These accidents could now be prevented; and the principal, indeed only, objection to the use of the instrument, in his mind, was removed. It was to the ingenuity of Mr. Weiss that he was indebted for putting his suggestion into execution.

#### LONDON UNIVERSITY.

##### *Distribution of Prizes. President, Sir JAMES GRAHAM.*

THIS gratifying ceremony took place on the 15th, in the presence of numerous spectators. The following are the names of the students who were successful candidates.

##### Professor THOMSON's Class (*Materia Medica and Therapeutics*).

Gold Medal.—Mr. Pidwell.

First Silver Medal.—Mr. Hulme Edge.

Second Silver Medal.—Mr. Cheetham.

##### In Professor CONOLLY's (*Nature and Treatment of Diseases*).

Gold Medal.—Mr. F. R. Taylor, of Tortola.

First Silver Medal.—Mr. H. O. Stephens, of Bristol.

Second Silver Medal.—Mr. R. Garner, of Staffordshire.

##### In Professor PATTISON's (*Anatomy*).

Gold Medal.—Mr. E. Merrion, of Rye, Sussex.

First Silver Medal.—Mr. H. Cooper, of Tranby, near Hull.

Second Silver Medal.—Mr. T. Bidwell, of Penzance.

*Distribution of Prizes in the London University.* 565

In Professor BELL's (*Physiology*).

Gold Medal.—Mr. W. Evans, of Dryclough, Lancashire.

First Silver Medal.—Mr. H. Cooper, of Tranby, near Hull.

Second Silver Medal.—Mr. T. G. Wright, of Stockton-upon-Tees.

In Professor BELL's (*Surgery*).

Gold Medal.—Mr. R. Garner, of Staffordshire.

First Silver Medal.—Mr. W. Evans, of Dryclough, Lancashire.

Second Silver Medal.—Mr. H. Cooper, of Tranby, near Hull.

In Professor DAVIS's (*Midwifery*).

Gold Medal.—Mr. F. R. Taylor, of Tortola.

First Silver Medal.—Mr. T. Wakefield, of Judd Place.

Second Silver Medal.—Mr. T. G. Wright, of Stockton-upon-Tees.

In Professor TURNER's (*Chemistry*).

Gold Medal.—Mr. J. N. Huddleston, George street, Euston square.

First Silver Medal.—Mr. J. P. Wall, of Hertfordshire.

Second Silver Medal.—Mr. W. Cooks, of Warwick.

In Professor GRANT's (*Comparative Anatomy*).

Gold Medal.—Mr. N. Esdell, of Twyford.

First Silver Medal.—Mr. E. Blackmore, of Manchester.

Second Silver Medal.—Mr. Benjamin Phillips.

In the Class of J. R. BENNETT, Esq. (*Practical Anatomy*).

Gold Medal.—Mr. E. J. Queckett, of Langport, Somersetshire.

First Silver Medal.—Mr. C. Nelson, of Lees.

Second Silver Medal.—Mr. Blackmore, of Manchester.

Many of the students obtained certificates of honour, to whom medals were not awarded. Mr. Richards and Mr. Garner were precluded from receiving prizes upon this occasion, as they had last year received the medals in the same classes in which they now again distinguished themselves.

We select the following answers, given by Mr. PIDWELL to some of the questions proposed by Professor THOMSON:

*Question 4.* What are the effects of Strychnia on the animal economy? on what set of nerves does it chiefly operate? in what diseases is it indicated? State the combination for securing its influence, the dose at first, and to what extent it may be carried.

*Answer.* Strychnia produces in the animal economy tetanic convulsions, or violent contractions of the spinal muscles and the extensors of the lower extremities, by which the body is bent backwards, and the limbs rendered rigid. The convulsions cease for a short time, and then commence again, the breathing is affected, and the animal dies. On opening the body, the right side of the heart is found gorged with black blood. Strychnia acts on the motor nerves, particularly on the spinal nerves. It is indicated in paraplegia arising from the effect of carbonate of lead; or indeed it may be given in paralysis of that part arising from any other cause, provided there is not much inflammation existing at the time. It has been said that strychnia operates more particularly on those muscles which are diseased in their action. The sulphate is a good form of the medicine. Dose at first not more than one fourth of a grain, but it may be carried to the extent of two or three grains.

*Q. 5.* When strychnia kills, what post-mortem appearances enable you to

assert that it was the cause of death? What is the supposed antidote of strychnia?

A. When strychnia kills, the appearance of the lungs and the empty state of the arteries indicate the agent. Should the igasauric acid have been combined with it, as in nux vomica, this may be tested by means of the sulphate of copper. The best antidote of strychnia is iodine, which renders it inert.

Q. 16. A man who has been suffering under depression of spirits dies suddenly: a small phial is found near the body, completely emptied of liquid, but having an odour that induces you to suspect that he has poisoned himself with Hydrocyanic acid. Describe this odour, the appearances of the body, the manner in which the contents of the stomach and the apparently empty phial should be tested, to demonstrate the truth of your suspicion.

A. In the first place, I should take a cork cut at the end, so that it should be perfectly fresh; then moisten it with a solution of potassa and proto-sulphate of iron; insert the cork thus moistened into the mouth of the phial; apply the hand to the phial for a few minutes, and then, taking out the cork, touch the surface that had been moistened with the potassa and sulphate of iron, and next with sulphuric acid: if hydrocyanic acid were present in the bottle, the end of the cork will present the colour of Prussian blue. The odour in the phial, and in the body of the patient when opened, would be, in case the poison were prussic acid, like the smell of laurel leaves, or the kernels of the peach, or the young tops of the black thorn when bruised: it is said to resemble that of the peach blossom, but this is not exactly so, as the oil of almonds has that smell more particularly. The most remarkable appearance about the body, if the person has not been dead long, is the apparent life of the eye and its brilliancy. On dissection, the heart is found gorged with blood of a dark colour. The contents of the stomach should be collected, and treated with distilled water acidulated, and then filtered. To the filtered fluid must be added, first a little potassa, then the solution of proto-sulphate of iron, and last sulphuric acid, on the addition of which you will see the Prussian blue make its appearance, if hydrocyanic acid was present.

Q. 22. When a person is poisoned by bichloride of mercury, what do you expect to see in the heart?

A. I should expect to find the valves of the aorta inflamed.

It is the intention of the Council to grant medical diplomas in the University. Upon this subject the following document has been issued:

*“Medical Diploma.* In the ‘Second Statement by the Council,’ published before the opening of the University in 1828, it is announced that, ‘besides certificates of the professors, the University will grant certificates of general proficiency in literature and science. Every student will be required to produce a certain number of Professors’ certificates, before he can be allowed to enter upon the examination for the general certificate.’ The object in granting this certificate, is to put the student in possession of a document which shall be an evidence of his having acquired at the University a certain amount of knowledge in the different departments of general and professional education. But, to make the document practically useful, it must have such a designation as the person obtaining it can conveniently affix to his name and be called by; as is the case when he takes a degree at an incorporated university. The Council have been for some time engaged in consi-

*Medical Diploma of the University of London.* 567.

dering the qualifications, conditions, and the form under which this diploma shall be granted in the different departments of education; they have not yet settled what these shall be in any other than the medical school, but expect to be able to announce the whole scheme before the conclusion of the present session. Having come to a decision upon the medical diploma, the Council have thought it advisable to make it known, before the medical students of the present session shall be dispersed. It has been resolved that the general university certificate shall be granted in the medical school under the following conditions and regulations, and that it shall be called 'The Diploma of Master of Medicine and Surgery in the University of London,' (which may be thus translated and abbreviated, *M. Med. et Chir. U. L.*)

" 1. That the candidate shall be twenty-one years of age. 2. That he shall have attended lectures on professional subjects, during three academical sessions of this University; or two sessions at this University, and one winter session of at least five months' duration in any established school at home or abroad. 3. That he shall have acquired certificates of honour in the following classes in the University: Practice of Medicine; Anatomy; Physiology; Surgery; Midwifery, and Diseases of Women and Children; *Materia Medica*; Botany; Chemistry; and Anatomical Demonstrations and Dissections. 4. That, in the year which may be spent out of the University, he shall have attended lectures on two different professional subjects, each course of such lectures being of at least five months' duration. 5. That he shall have attended the medical practice of an hospital, containing at least 100 beds, for twelve months; and the surgical practice of the same hospital, or another hospital of the same number of beds, for the like period of twelve months. 6. That he shall be required to translate a passage in writing from Celsus, Gregory, Heberden, or other Latin medical author. 7. That, having complied with the preceding regulations, he shall write an essay in the English language on some professional subject, chosen by himself, and approved of by the faculty of medicine before the essay is composed. That this essay shall be read in whole or in part, as the faculty may desire, at a public meeting in the University; and that the candidate shall be called upon to explain or defend the doctrines maintained in his essay. That he shall also make an anatomical demonstration, and be examined upon any part of his professional studies on which the faculty of medicine may think proper to propose questions.

" In proposing the above regulations for conferring an honorary distinction, suited to surgeons and general practitioners, the Council have thought it proper to require attendance on those classes only which are necessary for obtaining the diploma of the College of Surgeons of London, and Society of Apothecaries. But they are desirous that the attention of medical students should also be particularly directed to the subjects of clinical medicine, comparative anatomy, and medical jurisprudence: and it will also be a great recommendation to candidates that they should possess some knowledge of mathematics, natural philosophy, and natural history. The scheme of instruction in the University affords ample opportunity for such studies; and a diligent pupil, during the period prescribed by the regulations, may obtain respectable knowledge in several of those departments, without interfering with the more direct object of his pursuits. The diploma will be conferred in public on the 23d of December in each year, or the 22d, if the 23d be a



Sunday; and the examinations will commence on the corresponding day of the preceding week. The essay must be sent to the secretary of the Faculty of Medicine on or before the 15th of November, and must be signed by the candidate, with a declaration that it is wholly his own composition. In the event of students leaving England, or in other cases of emergency, the diploma will be granted at other periods of the session, if the candidates possess the necessary qualifications. In selecting the designation, care has been taken to avoid all interference with the titles and privileges conferred by chartered bodies. The value of the diploma to the possessor of it will depend upon its being known to be granted to those only who, after a strict examination, prove themselves worthy of such a distinction.

"The following extract from a report of the Faculty of Medicine contains their views as to the good effects upon the education of medical students which this measure may tend to produce: 'The medical profession is divided into three classes: viz. physicians, surgeons, and general practitioners. The latter form by far the greater body, and until this University can give a physician's degree, not many of those destined for that branch of the profession can be expected to take any considerable part of their education in its medical school. Under the appellation of general practitioners are included two distinct classes of medical men. One of these consists of practitioners who hold a highly respectable rank in the profession, and who have devoted much time, labour, and money to their professional education; men possessed of some attainments in the collateral sciences, and who, practising their profession in a liberal and scientific spirit, have the highest claim to the confidence of the public. Another class bearing the same appellation, consists of those who have acquired the right to practise by possessing only the *minimum* of knowledge by which the licence can be obtained, earned by the smallest possible expenditure of time and labour, and who consequently have very imperfect professional attainments. The public possess so little knowledge of the details of a medical and surgical education, that all the most serious duties of the profession are commonly confided, without inquiry, to any one who calls himself a general practitioner, and to such hands, especially in the country, the largest portion of professional duty and responsibility is intrusted. It becomes, therefore, a great duty for the University to endeavour to remedy the evil, as far as it has the means of doing so, by holding out this honorary distinction as encouragement to general practitioners to follow such a more extended course of study as the science they profess, and as the public interest require.'

"(By order of the Council,)

"LEONARD HORNER, *Warden*.

"*University of London; April 24, 1830.*"

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Mr. JEWEL has been unanimously elected one of the accoucheurs to the St. George's and St. James's Dispensary.

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*To the Editor of the London Medical and Physical Journal.*

*Reigate; May 11th, 1830.*

SIR: An association of medical men in Surrey, under the title of "The Surrey Benevolent Medical Society," and meeting yesterday at Epsom, being desir-

ous of doing some small justice to a worthy, an able, and an honourable man, agreed to address a letter to Dr. BURROWS, of which the following is a copy; and at the same time directed me to request the favor of you to insert it in the next Number of your Journal.

I have the honour to be, Sir, your most obedient servant,  
THOMAS MARTIN, *Secretary.*

*To Dr. Burrows.*

*Epsom; May 10th, 1830.*

Sir: The members of the Surrey Medical Society, in consequence of circumstances which have occurred, and from which you have been most strangely and unjustly misrepresented and traduced in the public newspapers, beg permission to express their sympathy and the assurance of their most cordial and undiminished regard for you, as individually their friend, the friend of our society, of medical science, and of humanity.

Conscious of your integrity, and of the blameless as well as praiseworthy tenor of your professional conduct upon all occasions, you hardly stand in need of this assurance from such humble individuals; but you have been so hardly and unjustly treated by the public press in particular, that they consider your professional brethren may, without impropriety, state to you that they are not forgetful of your former labours in behalf of the general practitioner; of the merits of your admirable writings; and of the friendship and kindness they have collectively and individually experienced at your hands.

Wishing you a long career of happiness, success, and of meritorious exertion in behalf of your suffering fellow-creatures, they remain your faithful friends and servants,

John Parrott,	Thomas B. Toovey,
Thomas Martin,	John Winslow Mayd,
John N. Shelley,	J. H. Montagu,
George Fletcher,	Wm. Heart,
James Tunstall,	Wm. Chaldecott,
Geo. Bottomley,	Thomas Steele,
Joseph Ward,	Thomas Smith,
Edward Wallace,	Alfred Hardwick.
Charles Cooper,	

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### MONTHLY LIST OF MEDICAL BOOKS.

*[Medical Works cannot be entered on this List except a copy be sent for the purpose; the titles of Books having frequently been transmitted to us, as published, which have not appeared for weeks, or even months, after.]*

On the Diseases and Injuries of Arteries, with the Operations required for their Cure: being the Substance of the Lectures delivered in the Theatre of the Royal College of Surgeons, in the Spring of 1829. By G. J. GUTHRIE, F.R.S. &c.—8vo. pp. 416. Burgess and Hill, London, 1830.

A Descriptive Road-book of Germany. By E. A. DOMEIER, B.A. and M.B.—Leigh, Strand, 1830.

The best-arranged guide for the traveller to Germany that has yet appeared. It is furnished with a very copious index, and contains a list of the German universities; specimens of two of the chief dialects; and a catalogue of plants which are not given in any other English book.

Modern Medicine influenced by Morbid Anatomy; An Oration delivered at the 57th Anniversary of the Medical Society of London. Also, an Apology for Medical Nomenclature. By LEONARD STEWART, M.D. &c.—8vo. pp. 56. Longman, London, 1850.

Remarks on Nervous and Mental Disorder, with especial Reference to recent Investigations on the Subject of Insanity. By DAVID UWINS, M.D.—Pp. 41. Underwood, 1850.

A Popular Description of the Aldinian Defensive Dresses, &c. for rescuing Human Life and Property from Injury or Destruction in Cases of Fire.—Pp. 24. Ridgway, London.

Cholera, its Nature, Cause, and Treatment; with original Views, physiological, pathological, and therapeutical, in relation to Fever; the Action of Poisons on the System, &c. To which is added, an Essay on Vital Temperature and Nervous Energy; explanatory, more particularly, of the Nature, Source, and Distribution of the latter, and of the Connexion between the Mind and the Body, &c. By CHARLES SEARLE, Surgeon, of the Hon. East-India Company's Madras Establishment.—8vo. pp. 255. Wilson, London, 1850.

### METEOROLOGICAL JOURNAL,

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

April	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 a.m.	max.	mid.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	10 p.m.	9 a.m.	2 p.m.	10 p.m.
20	.24		52	57	46	29.58	29.81	59	57	W	NW	Rain	Fine	Fine
21	.02		57	58	51	.76	.50	57	59	W	SW	Rain	Fine	Show'ry
22		●	56	58	52	.43	.29	59	65	WSW	WSW	Cloudy	Rain	Show'ry
23	.33		55	55	49	.20	.14	69	65	SW	SW	Rain	Rain	Cloudy
24	.15		55	57	46	.12	.52	63	55	W	W	Rain	Fine	Fine
25			51	60	43	.76	.94	55	52	W	NW	Fine	Fine	
26			56	62	45	30.06	30.07	50	48	W	WSW			
27			59	65	48	.09	.03	45	46	SW	ESE			
28		☽	62	65	52	29.97	29.91	46	47	ESE	ESE			
29			62	68	54	.86	.80	47	48	ESE	SE			
30			67	72	55	.73	.79	48	48	SE	WSW			
May														
1			59	66	46	.83	.88	47	45	WSW	WSW			
2			57	63	47	.93	30.00	45	45	W	W			
3			56	60	47	30.05	.02	45	45	W	WSW			
4			54	63	48	.02	29.98	45	46	SW	SE			
5			62	71	56	29.94	.91	46	46	SE	SE			
6			70	77	60	.74	.63	46	46	ESE	ESE			
7		○	70	75	55	.47	.48	46	48	ESE	SSW			
8			58	59	47	.43	.30	48	50	ESE	SE		Rain	Cloudy
9			50	54	48	.30	.22	53	55	NW	NW	Rain	Rain	Rain
10			53	55	44	.25	.47	55	55	W	NE	Cloudy	Rain	Cloudy
11	.50		50	54	45	.56	.61	55	54	NNE	N	Cloudy	Cloudy	Cloudy
12			52	56	46	.64	.72	54	55	N	NE	Fine	Fine	Cloudy
13			50	54	44	.81	.94	55	54	N	NNE	Cloudy	Cloudy	Cloudy
14			52	57	48	30.02	30.05	54	54	NE	ENE	Cloudy	Fine	Fine
15		☾	54	63	44	.05	.09	54	50	SSE	SSW	Fine	Fine	Cloudy
16			57	68	48	.09	.09	50	50	W	W			
17			60	73	58	.07	29.98	50	48	SW	WSW			
18			70	72	55	29.96	.75	46	45	WSW	WSW			
19			65	68	58	.75	.75	45	44	W	W			

The quantity of Rain fallen in April, was 2 inches and 28-100ths.

**ERRATUM** in the last Number. In the Memoirs of the late Dr. Lister, page 471, line 17, for "January" read "February."

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EIGHTH VOLUME OF THE NEW SERIES

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